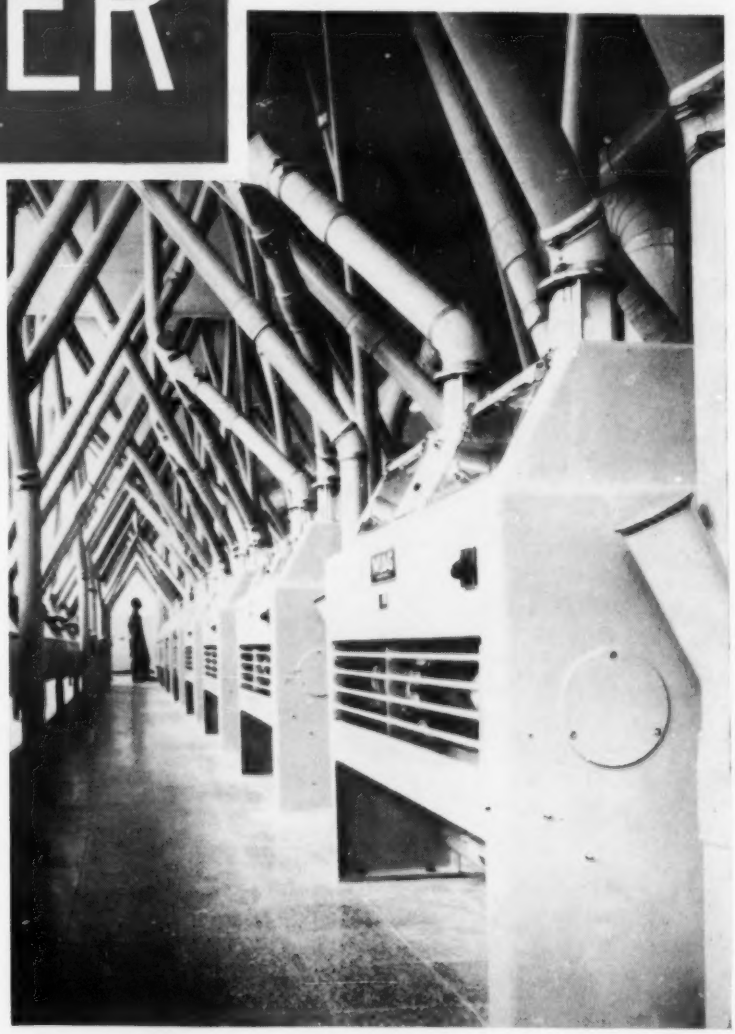
the NORTHWESTERN MILLER

THE INTERNATIONAL NEWS MAGAZINE FOR THE GRAIN, MILLING AND BAKING INDUSTRIES



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Volume 264 **SEPTEMBER 19, 1960** Number 6

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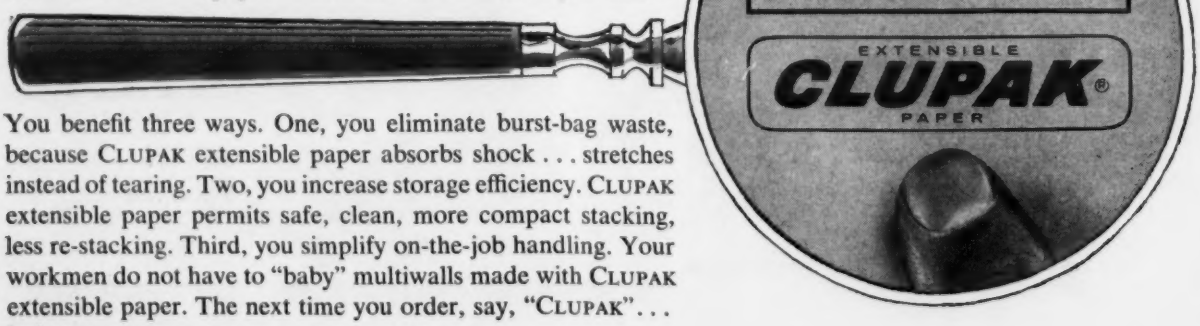

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the NORTHWESTERN MILLER

Published Every Other Week for the Grain, Flour and Baking Industries

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EXECUTIVE AND EDITORIAL OFFICES—2501 Wayzata Blvd., Minneapolis, Minn.; Tel. FRanklin 4-5200. Bell System Teletype Service at Minneapolis (MP 179), Kansas City (KC 295), Chicago (CG 340), New York (NY 1-2452), Washington, D.C. (WA 82).

SUBSCRIPTION RATES — One year $4, two years $7, in U.S.A. or U.S. possessions, Canada and Pan-America. Add $3 a year for postage to other countries. Single copy 50c. Second-class postage paid at Minneapolis, Minn.

Published by

THE MILLER PUBLISHING CO.

2501 Wayzata Blvd., Mineapolis, Minn.

(Address Mail to P. O. Box 67, Minneapolis 40, Minn.)

September 19, 1960

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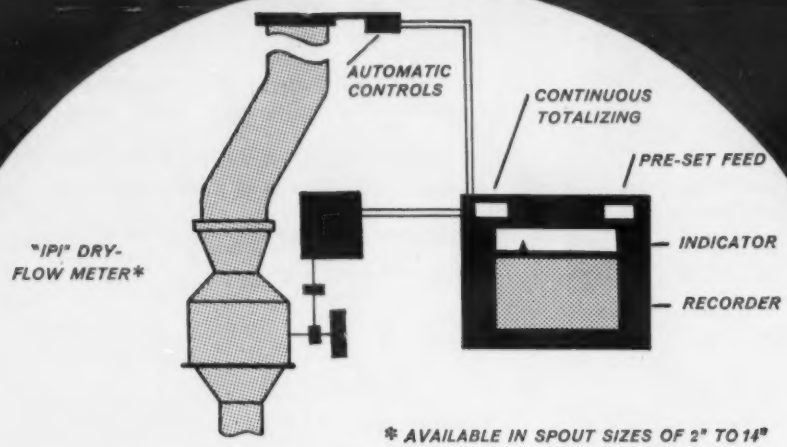
COVER PICTURE—

Purifier floor of the new Dominican Republic flour mill now in operation at Ciudad Trujillo —for the story see page 12.



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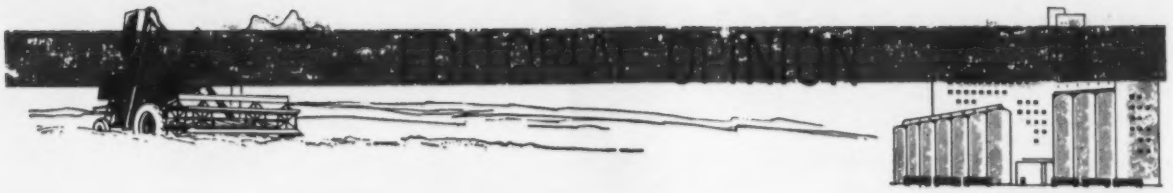

Clifford Hope Takes a Swipe at the Grain Men

THERE are two sides to every question and if you don't agree with what your opponent is saying, there are several ways of handling him. You can hit him over the head with a mallet; you can cast doubts upon his parentage; you can smear him with all the mud you can lay your hands on; you can get peevish and petulant. Or you can reply with reasoned arguments demolishing his case.

Some members of the grain and flour trades have succeeded in arousing the ire of Clifford R. Hope, president of Great Plains Wheat, Inc., and erstwhile Republican congressman from Kansas. In his reply, the normally urbane and diplomatic Mr. Hope made use of at least some of the methods we have outlined.

The story starts early last August when GPW asked the western railroads to give them a helping hand in building Far Eastern markets for Great Plains' wheat. The wheat growers wanted a cut of 28½¢ from the existing rate of 98½¢ cwt. on wheat shipped from Colorado and parts of Nebraska and Kansas to Pacific coast ports, from whence it would go over the Pacific to the outlets they had in mind. At the hearing they got the rate cut to 81¢.

The application provided certain safeguards against the diversion of the wheat to domestic channels.

Opposing the application were representatives of the grain trade from Kansas City, Omaha and Minneapolis as well as millers in the Kansas City area and in Minneapolis—and others.

Now revealed are Mr. Hope's reactions to the opposition. They were published in his weekly newsletter and reprinted in the Wheat Scoop, bright newspaper of the Montana Grain Growers Assn.

The Scoop quotes Mr. Hope as saying, "To listen to the testimony of the opponents, one would have gotten the idea that the shipment of from 10 to 15 million bushels of Great Plains wheat to the West Coast for export to Japan would wreck the milling industry of Kansas City, Omaha, and the Twin Cities.

"Furthermore, that through some kind of rascality known only to those engaged in the grain and milling business, this wheat would never get to Japan or even on shipboard, but would be diverted to domestic millers, while some of the low grade hard red winter wheat grown in Idaho would be substituted and by some sort of legerdemain palmed off on the unsuspecting Japanese. All this time the sharp grain dealers and millers would be laughing up their sleeves at the slick trick they played on the railroads in getting wheat for domestic use to the coast on an export rate.

"Frankly, I have heard farmers and others express distrust and suspicion of the activities and practices of those engaged in the grain trade, but until this exhibition at Chicago, I never realized how much distrust and suspicion those in the grain trade had of each other."

These comments, we respectfully suggest, are unworthy of a man of Mr. Hope's stature. The opposition is entitled to state its case and there is nothing to be gained by a reply as insulting as this one. The grain trade of the U.S. was selling the produce of American farmers long before GPW came into the picture and was selling it successfully. All these accusations will get us nowhere—they merely serve to arouse the distrust of the buyer. And a considerable amount of the distrust which has been aroused has been motivated by the sweeping accusations of some of the wheat men.

Perhaps there have been deficiencies in the past, but the vast majority of grain men and millers are honest men. There are dishonest people in every business and the straight dealers have to suffer for the sins of the minority.

To sell hard winters in the Far East presents a herculean task. Take the Philippines, for instance. The freight rate reduction obtained is not going to help a great deal, it seems to some observers. The Great Plainsmen will be in competition with 12% protein wheat from Queensland, Australia, and with Canadian wheats—12 to 15% protein. And with other U.S. wheats.

The freight cut notwithstanding, wheat can be taken out of New Orleans via the Panama at an advantageous rate. But if the wheat growers can do a better selling job than the grain trade, the best of luck to them. «

And Jack Kennedy Goes After the 'Wicked' Mill Owners

LABOR unions have played an important part in the developing economic structure of North America in the past few decades. They have done good though their paid officers tend to take unto themselves all the credit for the better working conditions and bigger wage scales. They pay little or no tribute to the employers whose organizational ability, research and planning have brought about the bigger sales of a wider range of products which allow the bigger pay checks and the mushrooming fringe benefits.

The unions operating in the flour milling industry are a mixed bag. They include the United Packinghouse Workers, the Teamsters, the International Longshoremen and the American Federation of Grain Millers.

On occasion, the millers have been impeded in their work of producing flour by jurisdictional arguments between unions which often bring production to a full stop; and work has stopped because the demands of the union officials have been so outrageous that the employers cannot afford to accede. Time is wasted and volume is lost while the two sides negotiate. Invariably, the worker is the loser in a prolonged stoppage. But the profits of the mills suffer also and without profit there is no economic health.

Right now, the politicians are avidly courting the union leaders to capture what they call the "labor vote." In political circles there is no recognition of the fact that the vote is the "people's vote," not the vote of particular groups devoted to gaining their own ends at the expense of others. Considerable effort is devoted to organizing groups which, it is hoped, will vote as a bloc at the behest of the leaders.

There is a tendency among Democrats to call the GOP the party of "big business" and "vested interest." The so called labor bloc is rampant with vested interest aimed at

EDITORIAL OPINION

securing the greatest benefits even at the expense of the country's economic health.

John Kennedy, Democratic hopeful for the presidency, is courting labor. And Mr. Kennedy, in his courtship, has made an ass of himself. In a telegram to the annual convention of the American Federation of Grain Millers in Denver he charged that the Republican administration has shown no concern at all for the workers in the mill or for consumers who buy the grain after it is ground.

His asininity continued thuswise: "The attitude of our federal administration has been that the only important element in the welfare of our country is the profit earned by the owner of the mill. What we need is a government that cares just as much for the workers and just as much for the consumers as it cares for the mill owners."

We have never read such palpable nonsense. Coming from a so-called top politician, a contender for leading the country, it is positively frightening. If Mr. Kennedy knows as little about the country's economy as he does about the economy of the flour milling industry, it will be a sad day if he is elected. Not merely sad for the "owners," but for the operatives, too . . . every member of the labor unions working in and with the industry.

Surely one of his team of advisors must be in a position to tell him that the profit on the sales dollar in the milling industry is the second lowest in the country—topping only the meat packers. The millers are delighted if they can make 2¢ on every sales dollar they take in for their flour. And some of them are not even making that.

And surely at least one of his high powered advisors can tell him that the industry's treatment of the rank and file workers is a proud one. Over the past 10 years the average hourly rate has increased 73%; fringe benefits are up 49% over a period of five years and now represent in the region of 20% of base pay. We are not dreaming up these figures—they come from actual case histories available to Mr. Kennedy and his advisors.

Mr. Kennedy's telegram to the American Federation of Grain Millers is irresponsible. It has all the signs of union propaganda and it appears that Mr. Kennedy is naive enough to swallow such pap.

Knowing some of the hard working men in the mills personally, and having a high regard for them, we are sure they do not go along with what John Kennedy has to say about the mill owners. His words are reminiscent of late 19th century and early 20th century politics when all the evils of the world were laid at the doors of the wicked owners. Would Mr. Kennedy have us believe that the management of the milling industry is not an enlightened one? The record will stand the closest scrutiny.

Mr. Kennedy does not know what he is talking about. He has allowed himself to be put in a ridiculous position and the operatives in the mills will recognize just how foolish was his telegram to Denver.

Perhaps Mr. Kennedy believes in Socialism. He can afford to. We can't. And neither can Roy Wellborn, newly elected federation president, who will succeed veteran Sam Ming next December. «

Canada's Clifford Soward Talks Some Export Sense

CLIFFORD SOWARD, president of the Maple Leaf Milling Co., Ltd., and chairman of the Canadian National Millers Assn., accentuated the changing pattern of flour exports in the remarks he addressed to association members at the annual dinner held in the Seigniory Club.

The days of selling branded flours abroad have not yet completely faded, but more and more government-motivated business is coming to the Canadian mills, he pointed out. In the fiscal year just ended, 10% of Canada's export total of 16.2 million hundredweights was government business. And he forecast that in 1961 the proportion is likely to be more.

That pattern is apparent in the U.S., too. Out of a total of 39 million hundredweights going into export channels in the year ended June 30, 1960, nearly 10.5 million was government business.

Mr. Soward was warm in his thanks to the government for the business it had put in the way of the millers. But he made this pertinent point: Not only do the exports help the millers themselves in their task of keeping the mills running and providing employment, they benefit the wheat growers, the transportation facilities, the bag makers, the equipment suppliers and the many providers of ancillary needs. And all that helps the general economy of the country.

An annual export total of 16.2 million a year (see table on page 32) is the absolute minimum necessary to stop any further major shutdowns of capacity, Mr. Soward declared. If the export total slips any more, then the industry will have to re-appraise its situation, he warned.

He noted that in recent years shipments have slipped from 24 million hundredweights to the present 16 million and in this connection the flow of U.S. subsidized flour could not be discounted.

Mr. Soward's remarks had been prepared for the ear of the minister of trade and commerce, Gordon Churchill. However, he was unable to attend because of illness and the deputy minister had a previous engagement. Called upon at short notice to address the gathering was Bob Esdale, chief of the grain division in the department. George Orwell in his book, 1984, described the notorious Room 101 where those convicted by the Thought Police were subjected to the purgatory of the thing they feared most—in the case of hero Winston Smith, a couple of venomous rats.

Room 101 for civil servants is to face an audience of taxpayers. Many a top official has taken to his heels at the thought.

Not Bob Esdale. He impressed the Canadian millers and their American guests with his delivery and with the common sense of his remarks. He showed an acute appreciation of the problems detailed by Mr. Soward. Mr. Esdale is a credit to his service and he was complimented by those present.

He confirmed Mr. Soward's opinion that more government purchases are likely. For instance, of the $55 million appropriated for aid under the Colombo plan, $12.5 million will be allocated for wheat and flour—and it follows that the millers will get their share for Mr. Esdale showed his appreciation of the dictum that Canadian flour spearheads the sale of Canadian wheat.

Government business means aid business of one sort or another and the lesson from all this is that Canada, with 10% of the U.S. population total, is no slouch when it comes to helping others. That industry and its ancillary suppliers of equipment and services can benefit by the government giving a manufactured article rather than the raw material was a lesson well and truly underlined by Mr. Soward. «

INDUSTRY RECORD . . .
An account of Trade Affairs and Events

United States:

Belhaven, N.C., appears to be the heart of a rapidly expanding volume of grain movement on the eastern seaboard, so Cargill, Inc., has acted accordingly by purchasing a 55,000 bu. grain elevator in that community. Actually, the big grain firm has leased and operated the elevator since 1954. Until purchase, ownership rested with Pungo Grain Co. at Belhaven. Cargill officials say the site is well located on the Pungo river, adjacent to the inland waterway along the Carolina coast, enabling receipt of local grains by truck, followed by both rail and water shipment outward.

●

Bemis Appointment

A Bemis Bro. Bag Co. veteran of 25 years has been moved right up to one of the top spots as assistant to the president, **Judson Bemis**. Advanced is **Addison M. Smith**, cost analyst for western operations at San Mateo, Cal., who now moves to the president's office in Minneapolis. Over the years Mr. Smith served with the Jaite Co., St. Helens, Ore., which Bemis acquired in 1941. He did duty as office manager for Bemis at St. Helens and in Vancouver, Wash., before being named western operations cost analyst in 1956. Originally, Mr. Smith was graduated from the University of Oregon.

A. M. Smith

●

Wheat Flour Exports

U.S. commercial exports of wheat flour in July hit 1,542,162 cwt., with some six-digit figures prominently evident to show millers just where the bulk of it was delivered.

Vietnam headed the list, receiving 132,273 cwt., with Indonesia next at 113,321 cwt. Cuba was close behind, receiving 112,978 cwt.

Saudi Arabia, the Arabian peninsular states, Norway, Pakistan, Japan, Nigeria and Jamaica took amounts ranging from slightly over 50,000 to almost 87,000 cwt. Quantities were, respectively: 86,707 cwt., 82,293 cwt., 77,540 cwt., 66,747 cwt., 62,829 cwt., 57,743 cwt. and 50,288 cwt.

U.S. exports of flour for foreign relief totaled 841,006 cwt. in July. Italy was the largest recipient, taking 267,293 cwt.; Egypt was second, 110,429 cwt.; Greece was next, 72,800 cwt., and Taiwan fourth, taking 62,780 cwt. Figures are from a report prepared by the export department of the Millers National Federation from official U.S. sources.

●

Resignation

Colorado Milling & Elevator Co. is losing one of its officials, but the industry will probably retain the benefit of his talents. **Robert M. Pease, Jr.**, has resigned from the C.M.&E. staff, where he has been since 1949 and later became a vice president. His family started in the milling business several generations ago, and his father, **Robert M. Pease**, was president and chairman of the firm's board of directors until retirement some months ago. The younger Mr. Pease, however, has indicated that he will remain in milling.

●

Crop Estimate

All wheat, as of the U.S. Department of Agriculture's September report now issued, is estimated at 1,368 million bushels, 21% more than last year and 25% above average.

AUGUST FLOUR OUTPUT EXCEEDS JULY

U.S. wheat flour production for August bounced back, as estimated by THE Northwestern MILLER, to hit a figure of 20,765,901 cwt., or 7.9% above July's official census bureau output of 19,253,000 cwt. It edged 1.2% above the figure of 20,512,000 cwt. for August of 1959.

Daily output for August dipped—spread over 23 days against 20 in July and 21 in August of last year—to 902,865 cwt. July averaged 963,000 cwt. daily and the previous August 977,000. The drop amounts to 6.2% less than July and 7.6% below August of last year. «

●

Holland:

Flour Duty Threat:

The export flour trade with Holland—1,853,526 cwt. shipped in the fiscal year 1959-60—is threatened by a reported government plan to impose a duty of 10 guilders per 100 kilos ($2.50 per 224 lb.) on imported flour. Current regulations allow the importation of 75,000 tons of flour from all foreign sources duty free, the balance paying 3% ad valorem. Reciprocity has been practiced between the U.S. and Netherlands governments in this connection and Dutch cheese, bulbs and other products enjoy favorable treatment in the U.S. Trade reaction —the Dutch can expect trouble if the flour trade is killed. «

"Yank Caldwell," said Old Dad Fetchit of the Fish River Roller Mills, "has been goin' around lately cussin' his pap on account, he says, that he didn't ever get a chanct to learn to read an' write. Seems Yank has the idea ef he'd ever learned writin' he'd get out a book on how to run the guv'ment and then the country'd get somewhere. 'The way it is now, 'less'n a feller is smart or works like hell all the time he don't never get a chanct to be nobody.' Butternut Cole has joined up with Yank on a scheme to start a new party an' run Butternut for Congress on a platform declarin' in favor of free shirts for farmers."

There's no Business like FLOUR BUSINESS

Le Tournai de Golf . . . Stuart Lockington Wins . . . Canadian Championship

When a group of millers, accustomed to playing a modicum of customer-golf with bakers and grocery products buyers, engage in internecine warfare, the competition can be tough. It can also be friendly, and the annual competition to find the Canadian golf-champ of the year is just that.

☆

Battling strongly through that competition was the new champion, **Stuart M. Lockington** of the Quaker Oats Co. of Canada, Ltd., who staggered off under the weight of the mammoth McDonald & Robb trophy, symbolic of the friendship (off-duty) which has existed between Canadian millers for 36 years.

☆

The occasion was the annual meeting, the annual dinner and the annual golf tournament of the Canadian National Millers Assn. and the affair was held in the beautiful surroundings of some of Canada's prettiest terrain, mecca of prominent Americans and Canadians—the Seigniory Club, Monte Bello, Que. And, as usual, arrangements were handled expertly by ebullient association secretary, **Danny Murphy**.

☆

Last year, too, Quaker's president, **Jim Wharry**, carried off the trophy for senior golfers which was presented by **Charles Ritz**, Robin Hood Flour Mills, Ltd., when he himself won the original trophy some years ago. Mr. Ritz generously replaced the trophy once again, a handsome bowl on a light oaken stand. And glorious was the battle for its possession which can be won by golfers who have achieved the age of 49 or over . . . and willing to admit it.

☆

First, it looked as though Mr. Ritz' associate, **John Tatam**, would be the winner. From the point of view of age, he only just crept under the wire. John was welcomed to CNMA as a "new Canadian" because of his new job as executive vice president and chief executive officer of Robin Hood.

☆

But it was not to be. In came **Frank Mount**, Ogilvie Flour Mills Co., Ltd., with a net of 69. Excitement was rising when the next foursome came in with master golfer —handicap 4—**M. J. McGrath** showing a net of 68. But there was some doubt as to whether young McGrath was eligible as a "Forty Niner." The Editor of THE Northwestern MILLER was assigned by the officials to check Mr. McGrath's credentials and these he produced with enthusiasm to prove he was (just) over 49. Then and only then did he realize what he had done! Mr. McGrath is an Ogilvie stalwart also and he had just edged out one of his "bosses," Mr. Mount.

☆

Sharing second and third prizes were Maple Leaf's redoubtable **Charles Coutts, Mr. Mount** and the newest miller of them all, **Carl Rogers,** who recently acquired control of the McCarthy Milling Co., Ltd., Streetsville, Ont. All had nets of 69.

Clifford E. Soward, Maple Leaf, CNMA chairman, hosted the dinner for the first time and right well he did. Sitting in a place of honor was his predecessor, **H. Norman Davis,** retired president of Ogilvie. Mr. Davis just had to be there because he is the industry's master story teller. Delighted to come back to the smell of flour, he said he felt as though he were between the upper and nether millstones, completely pre-sifted.

☆

Pre-sifted? Thereby hangs a tale. **Charles Ritz** had to undergo some good natured ribbing from his fellow millers because recently he blossomed out as a TV star in Canada. The president of the company which brought **Liberace** to Canadian television audiences, it is reported, gave a terrific performance introducing Robin Hood's pre-sifted flour on TV.

☆

Attending the gathering were some distinguished guests. Among them was **Don Hunter.** T. H. Taylor Co., chairman of the Canadian Flour Export Committee, and **G. T. Roe,** Great Star Flour Mills, Ltd., president of the Ontario Flour Millers Assn. And with them was the secretary of both groups, **Harry J. Dowsett.** Also among those present was **B. D. Milledge,** a veteran in the bag supply field who is an admired friend of just about every miller in Canada.

☆

Wherever millers foregather, you can depend on't that the stories flow thick and fast. And at the Canadian meetings there have been some topflight story spinners. It seemed at one time that only the great **Norman Davis** was left of that crowd which included **Davy Walker** of the old Purity Flour Mills—now Maple Leaf—and **H. J. Pattridge** of The Northwestern Miller. But we spotted a possible successor . . . **Eric Feldthusen** of Robin Hood. One of his stories may even get printed in our Grist of Grins one of these days.

☆

Telling the millers some of his experiences on a recent trip to his home country of Holland was **Jack Schuddeboom** of Eastern Canada Flour Mills, Ltd., present with his president, **Gaston Phenix.**

☆

Newcomer to the meeting was **J. J. Courtemanche,** Pillsbury Canada, Ltd., and he proved to be a popular personality. With him were company president, **William H. Pinchin** and **C. L. Weckman**, long-time attenders.

☆

Many were the reminiscences of what so-and-so did back in the years gone by. Who got locked in where and why? But the big question asked during the late evening after the annual dinner was "Where is **Danny Murphy**?" Mr. Murphy, it seems, got lost in the catacombs of the ancient Seigniory Club while allowing **Harry Dowsett** to guide him on a short cut. The cobwebbed pair appeared in due course to continue with the detailed and careful organization of what now goes down in the records as another successful gathering for the Canadian millers. «

Canadian Picture Gallery...

QUAKER'S Stuart Lockington receives the McDonald & Robb championship trophy from J. A. E. McDonald of the donating firm.

ROBIN HOOD'S newly appointed executive vice president, John Tatam, beams a smile as he is welcomed as a "new" Canadian by Clifford E. Soward.

CONGRATULATING their associate, Stu Lockington, in the middle, are Quaker's Ernie Wolff, left, and Ken Gadd.

C. L. WECKMAN, Pillsbury Canada, Ltd., examines the scorecard with Maple Leaf's George Scrimger, last year's winner.

CHECKING the score are Jim Hess, Ogilvie; J. A. E. McDonald, and Paul Callaghan, Robin Hood.

OGILVIE's Jack Tait, at left, poses for our camera with Arthur Atkins, Ogilvie prexy.

Close-up of Dominican Republic's Mill

It's New . . . It's Modern . . . It's Grinding on Schedule

Cover Story

VIEW OF THE NEW Molinos Dominicanos mill is pictured from Ciudad Trujillo. There is a ship unloading system, with a belt conveyor bridge connecting the unloading plant with the mill. Grain received is conveyed to cleaning and storage, while finished products in bags can be conveyed to be loaded into boats.

THE SIFTER FLOOR has seven, 4-section MIAG square sieve sifters handling a capacity of 4,000 cwt. with excellent results. The entire material handling of grain and mill stocks in this installation is with pneumatic systems, and the centrally controlled electric motors are interlocked to assure an operation as automatic as possible.

OPENING OF THE first modern flour mill in the Dominican Republic brought Generalissimo Dr. Rafael L. Trujillo, and his son, General L. Trujillo Hijo for a visit. The managing director of the mill, Senore Marco A. Gomez, is in the background between the president and his son.

A report on the new Molinos Dominicanos, C.A. Por A flour mill in the Dominican Republic was made in THE Northwestern MILLER of June 21. Now, here's a look at some of the operating features. Equipment was designed and erected by MIAG of Braunschweig, West Germany, which firm sent specially trained technicians to install the equipment. And the generalissimo himself, Dr. Rafael L. Trujillo, made an initial inspection.

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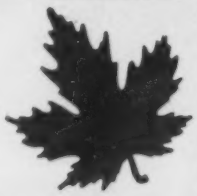
CANADIAN COMMENTARY



Big Wheat Crop Now a Certainty

It's a sure bet at this point—Western Canada will produce a big crop this year—the weather has been variable, showers and thunderstorms have made frequent harvest interruptions, but the figures seem to bear it out.

Close to 75% of the crop has been taken off, mostly in the south and central areas of Western Canada.

The Dominion Bureau of Statistics places the wheat crop for all Canada at 472,500,000 bu., up 59 million from a year ago. This includes Western Canada's estimated production of 453 million bushels against 399 million in 1959.

The wheat pools forecast the western crop at 464 million bushels. Earlier this year the Searle Grain Co., Ltd., released its estimate of 438,400,000 bu. Some private observers suggest the crop will go 480 million bushels or more. It is well known at this time that wheat yields generally are better than anticipated earlier, and this appears to be true in all three prairie provinces.

Most of the wheat inspected to date is grading Nos. 2 and 3 Northern, and there is a strong indication that the protein level will better the long-time average and that the highest protein wheat will come from southern Saskatchewan.

Deficiency Payments' Fight Lost

It now seems that the western farmers' fight for deficiency payments has been lost. This is the reaction to the government's decision to make acreage payments to western grain producers. The amount provided for the purpose at the recent session of parliament is $42,000,000. Checks have been mailed. The Canadian Wheat Board has been designated as the payment agent. The rate of payment will be $1 per cultivated acre up to a maximum of 200 acres. "Cultivated acreage" will include all acres listed in the 1959 crop year delivery permit book, except that shown as uncultivated land and natural pasture. Agricultural Minister Douglas Harkness said the acreage payments at this time will provide funds needed by farmers to assist them in harvesting this year's crop.

Canada made a plea to move more grain into the European Common Market area at the opening sessions of the General Agreement on Tariff and Trade at Geneva. Officials pressed for reasonable access into Common Market countries for Canadian agricultural markets as agricultural trade represented more than 40% of Canadian exports to Common Market member states. The large percentage of this is grain.

Wheat, Flour Export Clearances Rising

The initial export movement of wheat and flour in the current crop year may exceed that of a year ago if clearances for August and the first week of September offer a true indication. While official figures for August are not yet available, returns will probably show 24 million bushels wheat moved into export channels, while the flour total may exceed 3 million bushels in terms of wheat.

Last year the combined August movement was just short of 24.4 million bushels. In the first week of September alone, this year, almost 7.6 million bushels wheat and flour moved overseas. Wheat accounted for 6.8 million bushels of the aggregate, and the U.K. and Japan each took more than 2 million bushels. In the same period, clearances to Germany were 1,158,000 bu. — the largest weekly movement to that destination in many months. For the first seven days of September, flour exports were equivalent to 728,000 bu.

In the first five months of the 1959-60 crop year, Canadian wheat and flour clearances aggregated some 132 million bushels or just short of 50% of the crop year total of 272 million bushels, according to preliminary estimates. The big fall-off in clearances in the crop year just closed came in the four months January to April inclusive, 1960.

Visible Wheat Stocks Remain High . . . But

Visible stocks of Canadian wheat in all positions remain high at slightly less than 442 million bushels, but almost 43 million bushels less than the comparative total a year ago. The present visible supply includes a little more than 265 million bushels in the three prairie provinces. The big bulk of this is in country elevators. Stocks in Fort William/Port Arthur terminal elevators and eastern elevators have increased slightly.

Breakfast Foods Shipments Rise

Selling value of factory shipments from the breakfast foods industry in Canada in 1959 was $37,136,000, an increase of 3.4% from the 1958 total of $35,901,000. Number of establishments fell to 18 from 19 in 1958, while employees rose to 1,417 from 1,348, salaries and wages to $5,820,000 from $5,235,000 and cost of materials and supplies to $14,571,000 from $13,862,000. Shipments of prepared breakfast foods increased in volume to 92,731,000 lb. from 89,546,000 in the previous year and in value to $30,114,000 from $29,195,000.

Elevator Expansion At Port Arthur

United Grain Growers, Ltd., will construct a three-unit addition to its terminal elevator at Port Arthur. Included is rebuilding of the unit which collapsed a year ago. It is anticipated that with favorable weather and construction conditions a large share of the new capacity will be available when the 1961-62 crop year begins Aug. 1 next year.

With present capacity, additional space will bring the total registered grain capacity at the Port Arthur Terminal to 8,250,000 bu. The new units will provide improved shipping facilities to enable the largest vessels on the St. Lawrence Seaway to conveniently complete loading without moving from one position.

Dairy Queen Visits Grain Exchange

The Winnipeg Grain Exchange and Searle Farms, owned and operated by Searle Grain Co., Ltd., were host to a highly attractive visitor, Miss Eiran Griffith Evans of Denbigshire, North Wales. She is the newly appointed U.K. dairy queen, touring Manitoba as a guest of the Manitoba Dairy Assn.

Trade Minister Back at Work

Canada's Trade Minister, Gordon Churchill, has returned to work in Ottawa following an operation for an ulcer. «

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Earnings Down But Outlook Good For Montana Mills

Montana Flour Mills Co. closed its books for the fiscal year ended June 30 with earnings after taxes of $356,944—somewhat less than earnings of $382,621 for fiscal 1959—but with an optimistic report for several aspects of its operations in the next annual period.

Significantly, C. G. McClave, president and general manager, has informed his stockholders that milling division earnings for the past year were substantially better than for the year ended June 30, 1959, while feed division earnings showed a modest increase, but not reflective of the excellent foundation being laid by Montana Flour Mills for expanded operations anticipated in this and succeeding years.

Earnings for the year now closed were equal to $2.48 a share against $2.66 a share in the earlier fiscal period ended June 30, 1959. The company paid dividends of $115,191, equal to 80¢ a share in the past fiscal year, compared with dividends of $86,393, equal to 60¢ a share, in the previous period.

"It should be noted that, despite an increase of $72,506 in interest charges, an increase of $91,130 in year-end inventories and an increase of $95,232 in bad debts, cash on hand at the year's end was $138,365 greater than last year," said Mr. McClave. "Short-term notes payable have been reduced by $900,000, a total of $615,850 has been added to plant during the year, and working capital has been increased by $1,135,720."

Elevator Division

One of the company's elevator division accounts went bankrupt, the president's annual report explained, accounting for $84,000 of Montana's bad debt total, with prospects dim for any substantial recovery of the loss.

On the whole, the results of operations in the various divisions of the Great Falls-based milling firm were satisfactory the past year, with the exception of the elevator division, which also experienced a substantial drop in storage and handling revenues.

The business of Montana Flour Mills generally is in better shape than for some time, stated the president, for which he gives considerable credit to the industry, loyalty and initiative of company associates. The firm

Montana Flour Mills Co.

Comparative Balance Sheet, June 30, 1960 and 1959

ASSETS

CURRENT ASSETS:	June 30, 1960		June 30, 1959	
Cash on hand and in banks		$ 916,821.32		$ 778,456.35
Accounts receivable, trade	1,554,010.10		1,609,981.71	
Notes receivable	27,000.00		39,000.00	
Total	1,581,010.10		1,648,981.71	
Less allowance for doubtful accounts	60,000.00	1,521,010.10	60,000.00	1,588,981.71
Accrued storage receivable		71,765.82		
Travel advances		1,975.00		1,675.00
Railroad claims		3,866.26		895.59
Advances on transit & stored grain		105,571.74		59,070.53
Advances—employees		3,460.00		7,529.07
Prepaid interest and expense		16,210.46		16,892.09
Prepaid insurance		54,427.64		41,403.47
Inventories (valued at lower of cost or market):				
Wheat	1,223,138.89		1,286,831.27	
Flour	189,654.94		110,085.50	
Grains & misc. merchandise	273,563.65		132,529.17	
Feeds and ingredients	402,834.39		545,249.95	
Packages and supplies	120,922.53		140,222.17	
Chemicals, fertilizer & equipment	229,020.37		151,637.10	
Equity in wheat & flour contracts	(53,338.90)		(60,417.99)	
Prepaid freight	93,510.00		82,038.84	
Total inventories		2,479,305.87		2,388,176.01
Brokers margin deposits		7,624.75		26,877.50
Total current deposits		$5,182,038.96		$4,909,957.32
FIXED ASSETS:				
Plant and real estate	$5,307,970.48		$4,714,712.06	
Less allowance for depreciation	2,349,937.60		2,170,795.11	
Book value	2,958,032.88		2,543,916.95	
Sundry equipment at depreciated value	77,453.06		82,050.28	
Net fixed assets		3,035,485.94		2,625,967.23
OTHER ASSETS:				
Stocks and exchange membership	2,300.00		2,329.47	
Due on sale of assets	5,000.00		8,400.00	
Deposits	838.93		978.93	
Total other assets		8,138.93		11,708.40
Total assets		$8,225,663.83		$7,547,632.95

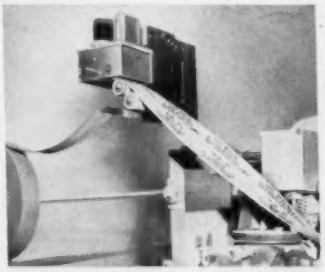
LIABILITIES AND CAPITAL

CURRENT LIABILITIES:	June 30, 1960		June 30, 1959	
Customers credit balance		$ 2,625.14		$ 8,139.14
Accounts payable, trade		20,768.04		51,358.56
Advances—grain in transit		358,104.50		217,197.23
Accrued commission		6,744.00		2,011.64
Payroll taxes accrued		16,020.20		8,998.92
Notes payable—portion of long term loans due within one year		100,000.00		
Notes payable—short term				900,000.00
Federal income tax	386,786.59		442,612.53	
Less paid on estimate	(171,500.00)	215,286.59	(35,903.30)	406,709.23
Minnesota corporation income tax		1,271.17		
Montana corporation license tax		35,308.66		27,222.92
Accrued rental		1,712.00		2,435.00
Accrued property taxes		66,400.00		64,600.00
Accrued interest payable—notes		3,644.48		
Disputed grain liability				2,851.17
Total current liabilities		$ 827,884.78		$1,691,523.81
LONG TERM LIABILITIES:				
First National City Bank of N. Y.	400,000.00			
Northwestern Mutual Life Insurance Co.	1,000,000.00			
Total	1,400,000.00			
Less portion due within 1 year shown above under current liabilities	100,000.00			
Total long term liabilities		1,300,000.00		
Total liabilities		$2,127,884.78		$1,691,523.81

CAPITAL:				
Capital stock issued (143,989 shares par value @ $10—authorized 250,000 shares)	$1,439,890.00		$1,439,890.00	
Retained earnings:				
Beginning balance	4,416,219.14		4,334,790.29	
Prior years' adjustments	(82.91)		(248.68)	
Total	4,416,136.23		4,334,541.61	
Less stock dividend			219,636.40	
Balance	4,416,136.23		4,114,905.21	
Profit for year	356,944.02		387,707.33	
Total	4,773,080.25		4,502,612.54	
Less cash dividends	115,191.20		86,393.40	
Balance end of year	$4,657,889.05		$4,416,219.14	
Total capital		6,097,779.05		5,856,109.14
Total liabilities and capital		$8,225,663.83		$7,547,632.95
Working capital		$4,354,154.18		$3,218,433.51
Ratio of current assets to liabilities		6.26		2.90
Book value per share of stock		$ 42.38		$ 40.67

weathered the fiscal year ended June 30 without labor difficulties, although a strike at the start of the current period stopped operations at its Bozeman feed and flour plants four weeks and the Great Falls mill five weeks.

As a consequence, the company is not "getting into motion" for the new year as quickly as it would like but, barring unforeseen circumstances, its outlook for the coming year is brighter than for the past one. Of particular importance, the report explains, is construction of a feed plant at Great Falls, due for completion in November, which should add substantially to the earnings potential of the company's feed division. «



MORE EFFICIENT, economical identification of the contents of its plain flour bags is obtained by International Milling Co. with a small automatic printing unit attached to the sewing machine. Instead of conventional bag header tape already pre-printed with the special brand or customer names, International prints the identifying copy on plain tape as part of the bag sewing operation.

West Virginia Outlines Progress Of Multiwall Program

Some major flour milling firms, with their eyes sharply focused on the feed end of their operations, listened to representatives of West Virginia Pulp & Paper Co. outline their firm's development and plans for extensible paper at a seminar held in Minneapolis.

Representatives of leading feed companies and millers heard V. S. Luke, manager of West Virginia's multiwall bag division, explain his firm's six years of experience in development, improvement and conversion of extensible paper to a point where it now can provide a unique "know-how" capable of saving the industry up to $1 million a year.

"Along with this invaluable 'know how' gained by our research, technical and engineering people in developing Clupak extensible paper, our sales representatives and technical service people have gained invaluable experience in the testing and sale of Wonderwall Clupak multiwall bags in the market place," said Mr. Luke.

Among companies represented at the seminar and at dinner as guests of West Virginia were Archer-Daniels-Midland Co., Doughboy Industries, General Mills, Inc., the Pillsbury Co., International Milling Co., Farmers Union Grain Terminal Assn.; Osborne-McMillan Elevator Co., Nutrena Mills, Inc., Northwest Cooperative Mills, and others. «

Obituaries

L. S. GREGORY, 67, prominent grain and flour milling executive and a life-long resident of the Minneapolis area, near St. Ignace, Mich., of a heart attack, while enroute east.

He was president of the Gregory Co., W. J. Jennison Co. and the Springfield (Minn.) Milling Corp., and a member of the Minneapolis Grain Exchange over 30 years. A graduate of Lawrenceville Academy, Princeton, N.J., he joined the Norton-Harjes Volunteer Ambulance Corps in 1916 and served overseas with this unit during World War I.

Mr. Gregory took employment with Powers Elevator Co., Williston, N.D., in 1918, but returned to Minneapolis in 1920 to join the family firm headed by his father, William D. Gregory.

He was a world traveller, joining his travels with compilation of an impressive stamp collection, performed as a track athlete in college, later became familiar as a yachtsman and, in most recent years, took to power boating. He was a member of the Minneapolis Club and the Wayzata Country Club.

Survivors include his wife, Gladys, sons William D. Gregory, II; Lawrence S., Jr., and two granddaughters, all of Wayzata, Minn.

The family prefers memorials to the Lisa Gregory Foundation, 311 E. 14th St., Minneapolis.

ESTON S. MANSFIELD, SR., 76, chairman of the board of Atlanta Milling Co., in Atlanta. He was originally from Cleveland, Tenn., coming to Atlanta Milling 60 years ago.

HAROLD H. BAKER, 65, retired district manager at Buffalo for the Quaker Oats Co., while enroute with his wife to the West Coast. He retired last March after 43 years with Quaker Oats.

LLOYD R. WOLFE, 66, long-time associate of the W. E. Long Co., in later years with the Bryo Co. and Carpenter Baking Co., in Highland Park (Ill.) Hospital, following a heart attack. Mr. Wolfe for many years was a well known figure in the baking industry and the allied trades.

Born in Blocher, Ind., he became associated with the W. E. Long Co., Chicago, in 1911, successively serving as controller, treasurer, vice president and president. When W. E. Long disposed of his holdings in 1948, Mr. Wolfe resigned to assume new responsibilities with both Bryo and Carpenter Baking.

He was a member of long standing

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in the Bakers Club of Chicago, the Bakers Courtesy Club and the American Society of Bakery Engineers; the Chicago Rotary Club; past master of South Shore Lodge, AF & AM 1056; a life member of the Art Institute of Chicago, and a member of the Chicago Natural History Museum and the Dairymen's Country Club.

Survivors are his wife, Pearl, and one son, Lloyd.

DR. ALAN BROWN, 73, one of three Canadian doctors who developed the infant food Pablum, at Toronto General Hospital. Dr. Brown, at the age of 31, became physician-in-chief of Toronto's Hospital for Sick Children, guiding its affairs for 32 years until retirement nine years ago.

Born in Toronto, Dr. Brown graduated from the University of Toronto in 1909 and interned at the Babies' Hospital in New York. He did postgraduate studies in Vienna, Munich, Berlin, Paris, London and Edinburgh. He returned to Canada in 1914 and joined the Hospital for Sick Children.

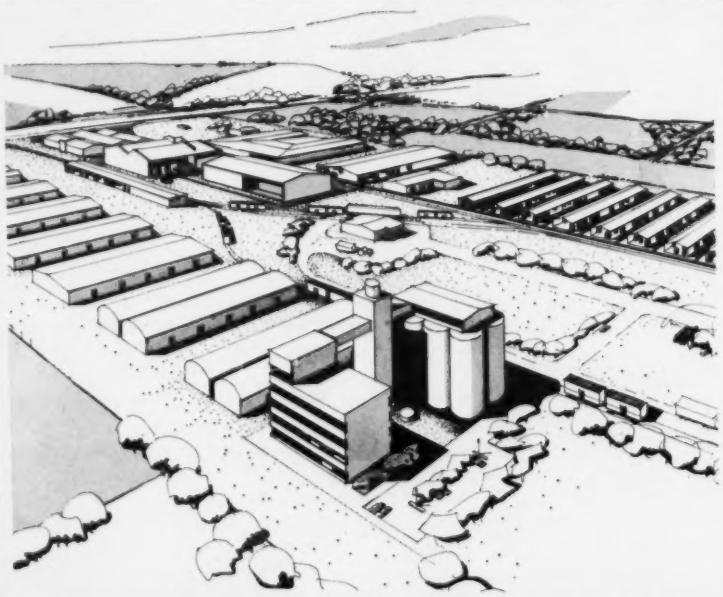
In 1930 he teamed with Dr. Frederick Tisdall and Dr. T. G. H. Drake and developed a nutritive biscuit for infants, a couple of years later developing the formula for a pre-cooked cereal known today as Pablum. Royalties from manufacture of the food were granted to the hospital—none of the three doctors received any revenue from its success. «

Pillsbury Promotes Four Officers

The Pillsbury Co. has three new vice presidents—and a new controller. The new veeps are **Terrance Hanold**, who is also treasurer, **Arthur P. Loomis** and **J. Cy Rapp**. New controller is **Arthur H. Rixe**.

Mr. Hanold was named principal financial officer of the firm in 1959 and he has held several legal and financial posts in the firm. Mr. Loomis will continue to head the company's refrigerated foods division . . . he has been general manager since '57. He joined Pillsbury in 1946 after naval service and worked his way through the grocery products division before going into the refrigerated division.

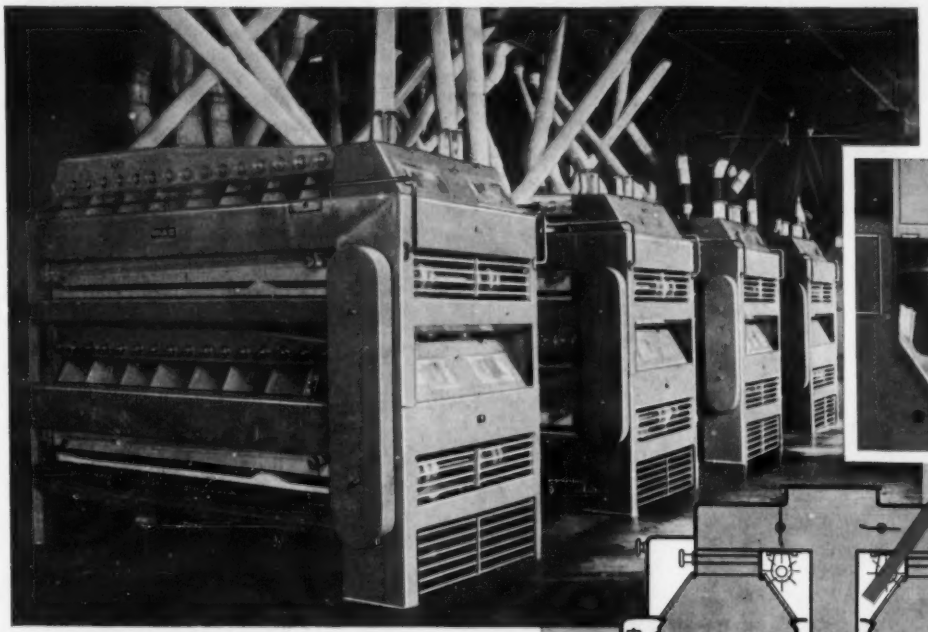
Mr. Rapp was president of Tidy House Products Co. which became a Pillsbury division earlier this year, and he continues as that division's chief executive officer. Mr. Rixe joined the firm in 1942 and his appointments ranged from chief accountant, controller of the grocery products division to assistant controller. «



THE MODERN NEW MILL in the central foreground will be built at Chinandega, Nicaragua, by General Mills, Inc., and Palazio Horvilleur & Co., Ltd., Managua, Nicaragua. This artist's sketch shows the new plant with other facilities of the Nicaraguan firm which occupy the same site. The mill will be able to process 100 tons of wheat and 40 tons of corn per day. Its construction and operation will be supervised by the technical staff of General Mills, and is the first commercial milling operation in Nicaragua's history. Construction will begin this fall, 80 miles northwest of Managua, Nicaragua.

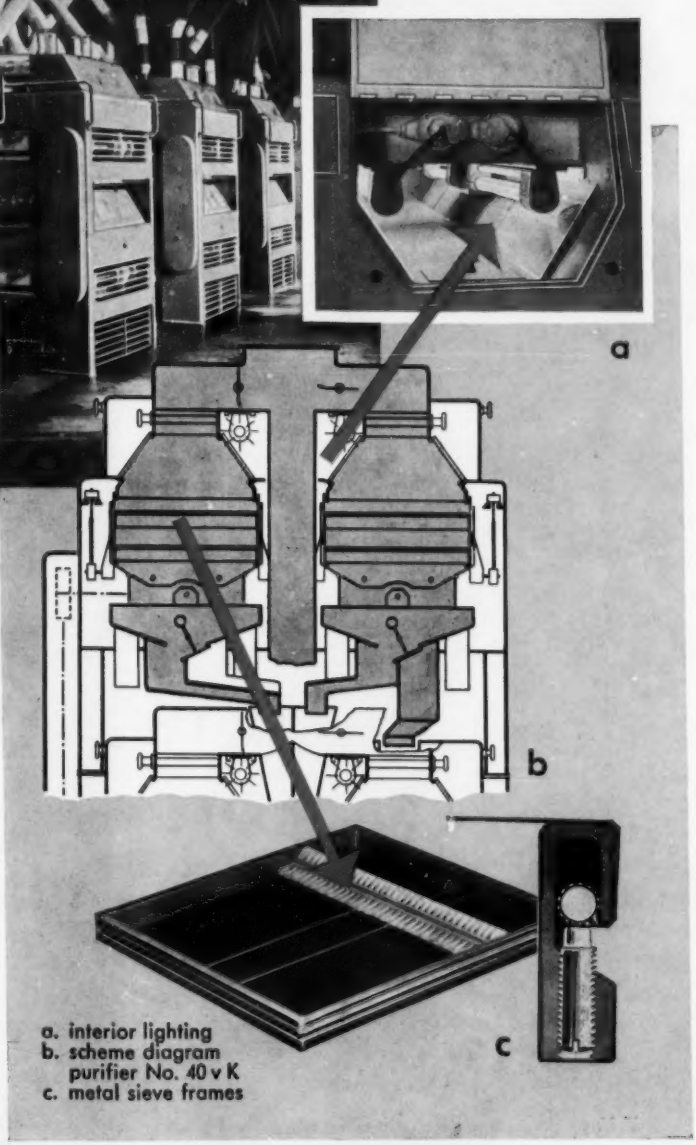
MIAG ALL-METAL PURIFIERS

quadruple design



Quadruple purifiers 40 vK as in the Commander-Larabee Milling Co., Minneapolis

1. **Functional design—not too high, built to meet sanitation requirements, easy access to all parts.**
2. **Double deck sieve layers, modern all-metal sieve frames, cloth can be tightened on all four sides and is exchangeable.**
3. **Suction hoods designed according to aerodynamic laws guarantee perfect purifying and low air consumption.**
4. **Interior daylight type lighting permits checking of the purification process.**
5. **Individual motor drive or lineshaft drive, machine perfectly balanced, thus no need for additional counterweights.**
6. **The flow of stock can easily be adapted to any flow sheet requirements.**



a. interior lighting
b. scheme diagram purifier No. 40 v K
c. metal sieve frames

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FARINOGRAPH CURVE CHARACTERISTICS OF MILLED FLOURS

By R. K. Bequette, R. B. Potts and C. A. Watson

Reprints of a technical article in which the authors make comparisons of Brabender Rapid Test and Brabender Quadruplex results with those obtained from the Buhler experimental mill. Illustrated with tables and charts **20c each up to 100 copies** larger supplies at reduced price

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Hill Shepardson Of Simon-Carter Firm Retires

Hill Shepardson, widely known and a time-tested veteran with Simon-Carter Co. and its predecessors for just a shade less than 30 years, has moved into retirement. He will be available as a consultant, however.

Mr. Shepardson's sales duties with respect to Carter equipment will be taken over by another able hand, E. O. "Link" Anderson, who has been

Hill Shepardson

E. O. Anderson

with the firm 11 years and in the milling machinery business about 20 years all told.

During his time with Simon-Carter and the organizations which preceded it, Carter-Mayhew Manufacturing Co. and the Hart-Carter Co., Mr. Shepardson has exercised his talents in sales management, sales promotion and advertising.

Now, although arrangements have been made whereby his knowledge and experience will be on call when needed, he and Mrs. Shepardson plan to make their home at 217 Rock Creek Rd., Clemson, S.C.

In taking over his new duties, Mr. Anderson will work under the supervision of M. L. "Maury" Olson, general sales manager. «

Humphrey Elevator Buys Allis-Chalmers Manlift Product Line

Humphrey Elevator Co., Faribault, Minn., has purchased the manlift elevator product line of Allis-Chalmers Mfg. Co., Milwaukee.

A. B. Morris, president of the firm, stated in announcing the purchase, "Our acquisition of the capital assets and good will of the Allis-Chalmers elevator product line includes the patterns for the 'Nordyke' and 'Marmon' manlifts. Spare parts for these will henceforth be made and supplied by us. The Humphrey manlift elevator will remain our prime product."

The firm has made manlift elevators since 1887 when its original model was introduced. «

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BULLETIN G-579 — Describes the DAY Type "RJ" filter. An all purpose, versatile unit. Bulletin gives operating features, dimensions and specifications.

BULLETIN 573 — Dual-Clone dust separators — noted for their low resistance and high cleaning efficiency. Easy to install, no maintenance, no moving parts.

BULLETIN 576 — "HV" heavy duty dust separator. Rugged construction and lower initial cost than many light gauge galvanized type cyclones.

BULLETIN F-75 — Reverse Jet Dust Filter Facts. Complete with specifications, typical equipment layouts, capacity and performance tables for DAY type "AC" filter.

BULLETIN N-578 — Gives complete information about Style "A" rotary valves. Construction features, specifications, dimensions and applications.

"SCHLITZ DEFEATS DUST" — FOOD ENGINEERING magazine reprint describes all out dust control for 3½ million bushel Schlitz grain elevator. Request Bulletin "Schlitz Defeats Dust."

"EFFICIENT DUST SNATCHERS" — Bulletin describes DAY's part in providing maximum safety and good housekeeping for starch packing building of large food processor.

BULLETIN 510 — DAY Unit Dust Collectors. Complete, low cost unit designed for plants or applications where central dust control systems are not practical.

BULLETIN I-585 — Industrial Fans. Complete with helpful selection charts, capacity tables, dimensions and specifications. Information on special types and arrangements included.

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WHERE THEY ARE MEETING

September

Sept. 21-23—Pennsylvania Millers & Feed Dealers Assn.; Hotel Penn Harris, Harrisburg Pa.; sec., Donald W. Parke, P.O. Box 329, Ephrata, Pa.

Sept. 22-23 — Michigan State Millers Assn., annual meeting; Hidden Valley, Gaylord, Mich.; sec., C. D. McKenzie, Jr., P.O. Box 35, Owosso, Mich.

Sept. 23-24—District 2, Association of Operative Millers; Aladdin Hotel, Kansas City, Mo.; sec., George Smutny, Safety Industries, Inc., Kansas City, Mo.

Sept. 24-26—Southwest Bakers Assn., annual convention; Herring Hotel, Amarillo, Texas; sec., J. R. L. Kilgore, P.O. Box 127, Albuquerque, N.M.

Sept. 30-Oct. 1—District 9, Association of Operative Millers; Benjamin Franklin Hotel, Seattle, Wash.; sec., Richard Schmidt, Centennial Mills, Inc., Spokane, Wash.

October

Oct. 2—Kansas Bakers Assn., annual fall meeting; Allis Hotel, Wichita, Kansas; sec., Warren M. Burke, 3232 Roanoke Rd., Kansas City, Mo.

Oct. 5-7—Association of Cereal Research, annual milling convention, Detmold, West Germany; address correspondence to the secretary, c/o Arbeitsgemeinschaft Getreideforschung E.V., Detmold, Am Schotzenberg 9, Postfach 23, W. Germany.

Oct. 7-8—District 3, Association of Operative Millers; Severin Hotel, Indianapolis, Ind.; sec., John Money, Quaker Oats Co., Akron, Ohio.

Oct. 15—District 6, Association of Operative Millers; Williams Milling Co., Quincy, Mich.; sec., Oscar Nelson, King Milling Co., Lowell, Mich.

Oct. 15-19—American Bakers Assn., annual meeting and convention; Hotel Sherman, Chicago, Illinois; sec., Harold Fiedler, 20 N. Wacker Drive, Chicago, Illinois.

Oct. 16—Bakery Equipment Manufacturers Association, Fall meeting; Hotel Sherman, Chicago, Illinois; sec., Raymond J. Walter, 511 Fifth Avenue, New York 17, N.Y.

Oct. 22—District 8, Association of Operative Millers; Lenox Hotel, Buffalo,

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CALENDAR FOR 1960-61

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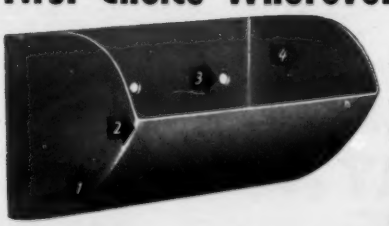

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✓2. Inspect plant from top to bottom to see if all possible is being done to prevent loss — not only from fire but also from production slow-up or break-down.

✓3. Show how simple "preventive maintenance" records and follow-up can reduce losses — and increase values, production and profits.

✓4. Show how personnel in plants large and small can be organized — all the way from a small committee to a fire brigade — to prevent loss.

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MILL OWNERS MUTUAL INSURANCE COMPANY (OF IOWA), DES MOINES, *Est.* 1875;

MILLERS' MUTUAL INSURANCE ASSOCIATION OF ILLINOIS, ALTON, *Est.* 1877;

MILLERS MUTUAL FIRE INSURANCE COMPANY (OF PENNSYLVANIA), HARRISBURG, *Est.* 1890;

MILLERS NATIONAL INSURANCE COMPANY, CHICAGO, *Est.* 1865;

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PENNSYLVANIA MILLERS MUTUAL INSURANCE COMPANY, WILKES BARRE, *Est.* 1887.

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SOUTHEASTERN DEPARTMENT, NASHVILLE;
OHIO DEPARTMENT, COLUMBUS;
PACIFIC DEPARTMENT, SEATTLE.

In addition to their fieldmen, to serve you in the laboratory and in the field are the engineers of Mill Mutual Fire Prevention Bureau, 400 West Madison Street, Chicago.

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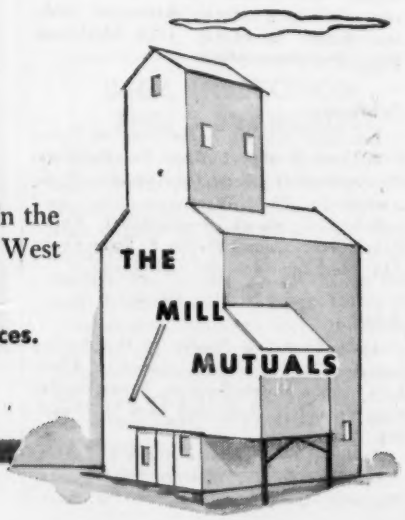

N.Y.; sec., Roy F. Kehr, Kressilk Products, Inc., Depew, N.Y.

Oct. 24—Connecticut Bakers Assn., Inc., annual convention; Hotel Stratford, Bridgeport, Conn.; sec., Charles Barr, 584 Campbell Ave., West Haven 16, Conn.

Oct. 28-29—District 11, Association of Operative Millers; Robert E. Lee Hotel, Winston Salem, N.C.; sec., J. L. Campbell, Sterwin Chemicals, Inc., 5435 Northside Road, Charlotte, N.C.

November

Nov. 4-5—District 13, Association of Operative Millers; Palliser Hotel, Calgary, Alta., Canada; sec., Gerald Dennehy, Merck & Co., Winnipeg, Man., Canada.

Nov. 5-6—Nebraska Bakers Assn., annual convention; Town House, Omaha, Neb.; sec., Louis F. O'Konski, Jr., Standard Brands, Inc., 1806 Chicago St., Box 1042, Omaha, Neb.

Nov. 11-12—District 12, Association of Operative Millers; Ben Lomond Hotel, Ogden, Utah; sec., Joseph J. Keiser, Salt Lake Flour Mills, Salt Lake City, Utah.

Nov. 14-15 — New England Bakers Assn., fall convention; Sheraton-Plaza Hotel, Boston, Mass.; sec., William E. Bowman, 945 Great Plain Ave., Needham 92, Mass.

Nov. 14-15—Washington Association of Wheat Growers, annual convention; Davenport Hotel, Portland, Ore.; sec., Milton Wolf, Latah, Wash.

December

Dec. 10—District 2, Association of Operative Millers; Aladdin Hotel, Kansas City, Mo.; sec., George Smutny, Safety Industries, Inc., Kansas City, Mo.

1961

January

Jan. 14-17—Ohio Bakers Assn., annual convention; Carter Hotel, Cleveland, Ohio; sec., Clark L. Coffman, Seneca Hotel, Columbus, Ohio.

January 20-21—District 10, Association of Operative Millers; Fresno Hacienda Motel, Fresno, Cal.; sec., Gene Thomas, California Mill Equip. Co., San Mateo.

Jan. 29-31—Potomac States Bakers Assn., 45th annual winter convention; Lord Baltimore Hotel, Baltimore, Md.; sec., Edwin C. Muhly, 1126 Mathieson Bldg., Baltimore, Md.

February

Feb. 3-5—Bakers Association of Carolinas, annual stag outing; The Carolina, Pinehurst, N.C.; sec., Mac Inscoe, V. C. Ambler Co., Paris, Texas.

Feb. 25 - March 4—National Retail Bakers Week; chm., Walter R. Schuchardt, 735 West Sheridan Road, Chicago.

April

April 4—Allied Trades of the Baking Industry Div. 4, annual assembly. Abraham Lincoln Hotel, Reading, Pennsylvania; sec., Vernon N. Bush, 330 Bern St., Reading, Pa.

April 9-12—Oklahoma-Arkansas Bakers, annual convention; Western Hills Lodge, Wagoner, Oklahoma; sec., Jno. C. Sum-

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Type S Purifiers offer these outstanding features...

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High capacity.

Need no "gadgets."

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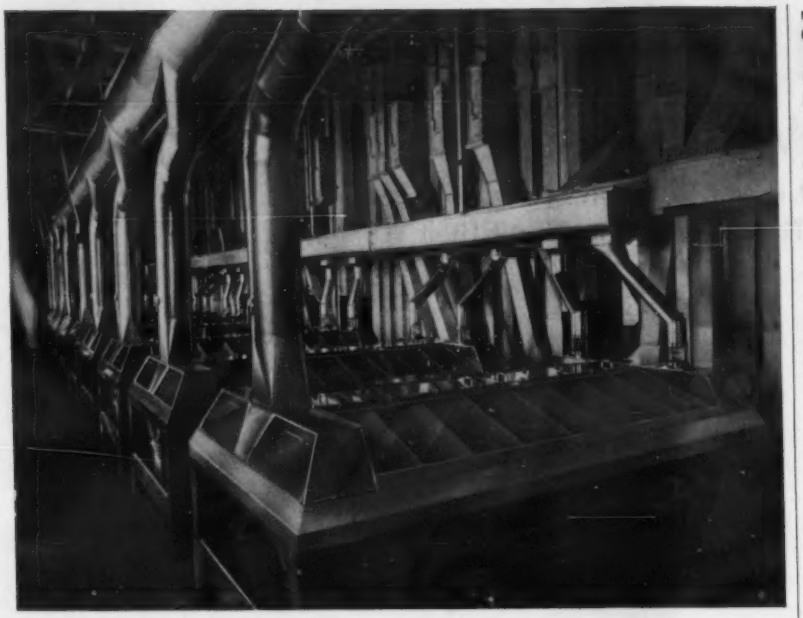

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mers, Oklahoma State Tech., Okmulgee, Oklahoma.

April 9-13—American Association of Cereal Chemists, annual convention; Baker Hotel, Dallas, Texas; sec., Ray Tarleton, 1955 University Ave., St. Paul 4, Minn.

April 10-12—Pacific Northwest Bakers Conference; Multnomah Hotel, Portland, Ore.; sec.-mgr., Roger Williams, P.O. Box 486, Salem, Ore.

April 16-19—Associated Retail Bakers of America, annual convention; Hotel Sherman, Chicago, Ill.; sec., Miss Trudy Schurr, 731-35 W. Sheridan Rd., Chicago.

April 23-28—Grain Elevator & Processing Superintendents, annual convention; Baker Hotel, Hutchinson, Kansas; sec., George M. Clark, 1115 Board of Trade Bldg., Chicago 4.

May

May 9-11—Millers National Federation, annual convention; Edgewater Beach Hotel, Chicago; sec., John Sherlock, MNF, 309 W. Jackson Blvd., Chicago 6.

May 22-25—Association of Operative Millers, annual technical conference and trade show, Hotel Pick-Nicollet, Minneapolis, Minn.; sec., Donald S. Eber, 639 Board of Trade Bldg., Kansas City, Mo.

May 26-28—National Association of Flour Distributors, annual convention; Hilton Hotel, Pittsburgh, Pa.; sec., Philip W. Orth, Jr., Ph. Orth Co., 304 E. Florida St., Milwaukee 4, Wis.

June

June 4-6—New York State Association of Manufacturing Retail Bakers, annual convention; Westchester Town House, Yonkers, N.Y.; sec., Frank E. Englert, 135 Primrose Drive, New Hyde Park, N.Y.

July

July 16-19—West Virginia Bakers Assn., 1961 convention; the Greenbrier Hotel, White Sulphur Springs, W.Va.; sec., Mrs. Edward R. Johnson, 611 Pennsylvania Ave., Charleston 2, W.Va.

September

Sept. 17-18—Wisconsin Bakers Assn., annual convention; Plankinton House, Milwaukee, Wis.; sec., Fred H. Laufenburg, 6173 Plankinton Bldg., 161 W. Wisconsin Ave., Milwaukee 3.

USDA INSPECTION FEES ADVANCED

Effective Sept. 1, the U.S. Department of Agriculture increased fees for appeal inspections of grain and overtime charges in connection with these inspections. Old $8 per car fees advanced to $9 and cargo grain fees went from $2 to $2.25 per 1,000 bu. Comparable increases were made for appeals on trucklots and submitted samples. Overtime charges on appeals on grain, authorized by the U.S. Grain Standards Act, went from $5.80 to $6.40 an hour per man.

A Milling Technology Feature

To Wash or Not to Wash?

That is the Question Many Millers Ask, But They Are Talking About Their Wheat

By Donald Deane

The preparation of wheat for milling is perhaps one of the most important sections of the process and it is certainly one which, if neglected, will not allow good results to be obtained from the mill regardless of how well it is run or how much equipment is installed.

Wheat washing is certainly far from being new in the milling industry but it has recently received increased attention.

THERE IS A CONTINUAL TREND towards greater sanitation of both raw materials and installations where food industries are concerned. I am sure that most people will readily admit that with a staple food such as flour, washing of the wheat is certainly highly desirable for sanitation reasons alone even if any other benefits are discounted. There are a large number of plants in the U.S. where the cleaning flow incorporates washing in one form or another but there is also a large percentage of mills which do not incorporate it.

I do not have any accurate statistics available but I would estimate that close to 50% of the total flour produced for human consumption has been made from unwashed wheat! This figure is based purely on visual assessment over a fairly large number of plants visited.

Although one might argue that the outer coat of the wheat grain is removed from the consumed part of the finished product in much the same way as the peel is removed from an orange before eating, the fact remains that there is no way of preventing any dirt lodged in the crease from getting into the flour once the milling process has been started. Furthermore there is no reliable method of removing crease dirt other than by washing and this takes into account the use of any efficient scourer on the market today.

So far we have looked at this matter solely from the viewpoint of sanitation. This is, of course, an extremely important consideration but as millers we are also just as concerned about the relation of washing wheat and milling results. To revert for a moment to the presence of crease dirt which invariably takes the form of inorganic matter, it is safe to assume that if it is not removed there will be an increase in flour ash directly proportional to the amount of dirt present. This fact has been substantiated by tests to which I shall shortly be referring. Milling of dirty wheat may be compared to throwing a handful of sand into flour for good measure before sealing up the bags! This is perhaps a gross exaggeration but the moral behind it holds good.

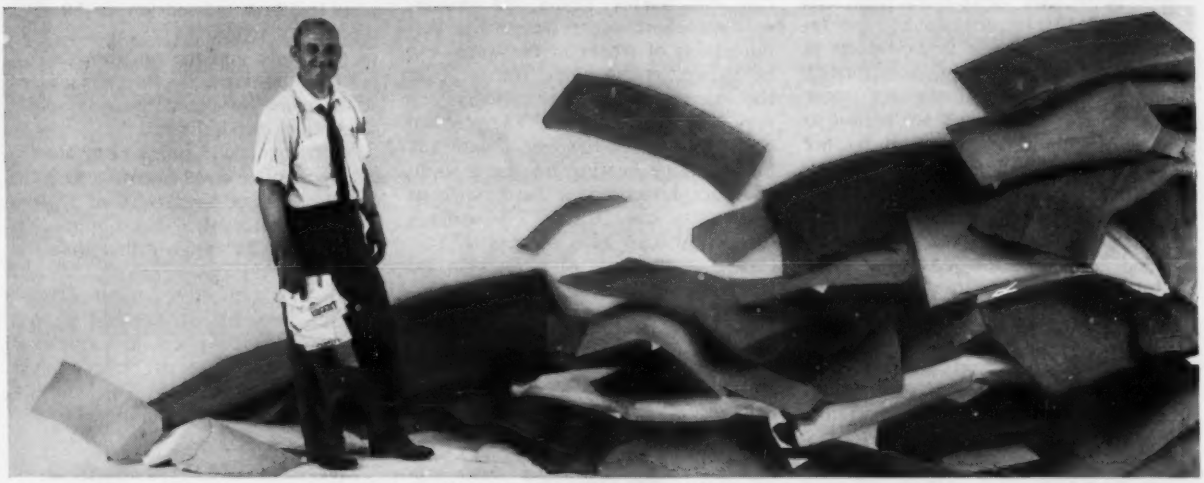
I AM NOT TRYING TO INFER that every grain of wheat passing into the first break rolls carries with it, hidden in the crease, a store of potential "ash increaser," but, as it is unlikely that the quantity or even the presence of crease dirt in any given wheat variety will be known, it would appear prudent to make every possible provision for its removal. This is adoption of the policy "prevention is better than cure" except that in this case there is no cure for an inferior product. It only needs one hundredth of one percent (0.01%) of inorganic crease dirt or stones to be present in the wheat to 1 Bk. to increase a straight-grade flour ash of 0.46% to 0.47%.

I had the opportunity some years ago to witness some tests in a small country mill in Europe. This plant had a capacity of about 450 cwt. per 24 hours and had received an order to supply some flour of any grade to a glue factory. The progressive owner, who was a miller in his own right, decided that this was the chance to evaluate his newly installed washer and whizzer. He was using two bins of inferior grade wheat to manufacture the flour and so elected to clean and process the wheat from one bin in the normal way and to give the wheat from the second bin the exact same cleaning treatment but by-passing the washer and whizzer. The moisture of the wheat in this latter case was brought up to the same level by straight water addition so both bins of wheat went on to the mill in identical milling condition.

The washed wheat was milled first followed immediately by the unwashed sample and the mill setting was not touched throughout the test. Results were rather staggering. Straight-grade flour on the washed wheat was 0.58% (15% moisture basis) and on the straight-grade from the unwashed wheat it was 0.64%. The additional 0.06% ash appeared in the flours from the first three breaks. Needless to say, this test was carried out during the wartime high extraction days. Several months later there was a similar repeat order when the same test was run but this time using better grade wheat. The difference in straight run ash levels was 0.03% and again the total increase appeared in the break redust flour. It goes without saying that the owner considered he had made a good investment.

THE REMARKS which I have made regarding the effects of crease

The pros and cons of wheat washing are debated avidly, and sometimes heatedly, whenever and wherever millers gather. It is an acutely controversial subject and there are many sides to the problem. Mr. Deane, who is with the Simon-Carter Co., tackles the subject forthrightly in this article. His early milling training was gained in Britain but he has already chalked up many years' experience serving American and Canadian millers on behalf of his firm.



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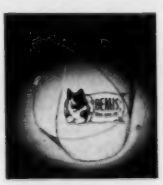

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Wheat Washing (continued)

dirt also apply, of course, to the presence of stones in the wheat to 1 Bk. Stones, however, also possess a remarkable blunting property on break roll corrugations in addition to their detrimental effects on ash. Stones with similar dimensions to wheat can not be separated by sieving, indented surfaces or aspiration and there are only two methods of achieving a reasonably efficient separation. The first is by washing and the second method is by gravity table. Both types of machine utilize the difference in specific gravity between the stones and wheat to make the separation. Most persons are thoroughly conversant with the gravity table or dry stoner and before discussing a few more aspects of stone separation, I will very briefly outline the combined washer, stoner and whizzer. Time does not permit us to examine other classes of washer such as the pulsation, conical and concentric machines and, in any event, these latter types have certain disadvantages and have largely been superseded by the screw conveyor type. There is, therefore, little point in discussing them now.

ALL PRESENT DAY combined washers, stoners and whizzers are based on the original "Mumford" design which was introduced by Henry Simon, Ltd., many years ago. It is a tribute to the original design that the same principles of operation are used today and only a few refinements and general outward stream-lining have been embodied in the modern versions.

The combined washer, stoner and whizzer consists of two parts — the washing and stoning tank and the whizzer section.

The washing and stoning tank is made of cast iron and the wheat is fed through a sliding, telescopic spout into a trough running along one side of the tank. The trough contains two screw conveyors, the upper one being the wheat conveyor and the lower one the stoning conveyor.

The wheat conveyor in the washing tank discharges the wheat into the whizzer, in which the surplus water clinging to the surface of the grains is removed.

On entering the whizzer the wheat is violently thrashed by the lowest lifters, which run below water level; this treatment removes any remaining surface dirt and is specially effective in getting the dirt out of the crease of the grain. The inclined lifters then propel the wheat upwards, flinging it against the perforated covers and driving the surface moisture out through the slots; the drying is assisted by the strong air currents drawn up by the beaters, aided by two sets of fan blades mounted on the top of the whizzer shaft. The wheat is finally discharged from a spout at the top of the whizzer section.

THE FROTH caused by the tremendous churning of the water is broken up and subdued by water sprays in the washer tank and by another spray at the water outlet of the whizzer.

One of the features of this type of combined washer, stoner and whizzer, as opposed to other designs, is that immersion of wheat in the water can be varied, giving some control over the amount of water absorbed which may vary from 2 to 5%. The physical characteristics of the wheat naturally have a large bearing on the amount of water taken up; a hard, vitreous wheat may only absorb 2% while a soft wheat may take up nearly 5%. Changing the point of immersion the full length of the washing tank—a distance of about 4 ft. on the largest size machines, makes a difference of from ¼ to ½% in the moisture content as measured after the whizzer. An average figure for hard wheat can be taken as 0.15% moisture variation for each foot of length travelled by the wheat in the washing conveyors.

The length of the washing process, whether the wheat has been damped before arriving on the washer and also the efficiency of whizzing largely decide the amount of water carried off with any given wheat variety. For maximum efficiency of water separation, or whizzing, it is essential that the whizzer be run up to speed, that the rotating vanes or lifters are not worn and that they have the specified clearance of approximately ⅜ inch from the tips to the perforated screen. The temperature of both the wheat and the water will also have a slight bearing on the rate of absorption and hardness of the washing water may have a slight lowering effect on moisture penetration.

THE AMOUNT OF WATER used by the combined washer, stoner and whizzer depends partly on the amount absorbed by the wheat, partly on the extra amount needed for froth reducing sprays but mainly on the degree of cleanliness desired in the total quantity of water circulating through the washing tank and whizzer. The cleanliness of the water in turn depends on the amount of dirt in the wheat. The minimum amount of water under favorable conditions should never be under 1½ gallons per bushel while an average consumption can be taken as 3 gallons per bushel.

Naturally, the action of the machine and the whizzer section in particular, causes some loose beeswing or outer bran coating to be detached from the wheat. Although it can not be claimed to be a scouring action in the true sense of the word, the immersion in water and the action of the lifters or vanes obviously causes some detachment of bran layers which float away with the overflow water.

IN SOME PLANTS this overflow is passed through a crude form of filter consisting of little more than a wire mesh reel. The collected sediment is then pressed on a detacher type of machine to expel the bulk of the water and the remaining stock is then dried on a steam jacketed screw conveyor before passing to the screenings disposal plant.

With this crude but very economical type of recovery plant I have heard claims of a recovery of 1/10% of the wheat washed but I think this figure is the exception rather than the rule.

To conclude this general exposition on washing of wheat I should like to quickly review the aims behind incorporation of a combined washer, stoner and whizzer in any wheat cleaning installation.

- Firstly, it is a means of providing water addition to bring the moisture of the wheat to suitable milling level.
- Secondly, it provides a limited means of control on the moisture addition by allowing variation of the length of immersion.
- Thirdly, it provides a means of removing stones and non-magnetic metal particles of similar dimensions to those of wheat.
- Fourthly, it provides the only known means of removing adhering crease dirt.

In any cleaning house a means of adding water must be provided and also this must incorporate a means of controlling the amount. Stone and non-magnetic particle removal is also an essential and this separation is not infrequently carried out on gravity table machines.

The combined washer, stoner and whizzer incorporates all these points in one combined operation and as, in addition, it provides the only reliable means of cleaning the crease area and removing hidden dirt, there appears to be ample justification for describing it as an extremely useful part of the milling process. «

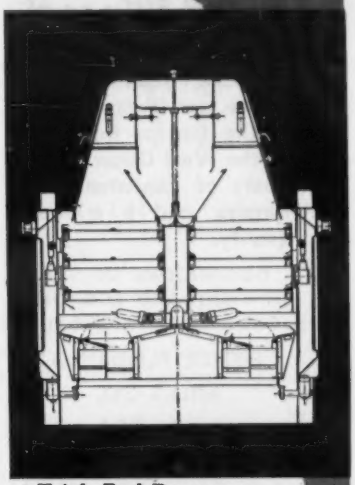
"Triple-Deck Purifiers give us lowest fragment count" *(says Superintendent of large milling firm)*

"Since we changed to BUHLER *Triple-Deck* PURIFIERS in one of our mills, its flour has fewer insect fragments than that from any of our other plants," says the superintendent of one of North America's largest milling firms.

Yes . . . and there's a good reason, because lighter particles are stratified on the top sieve where they are carried away by air or tailed over. Thus, the two lower sieves have clean products.

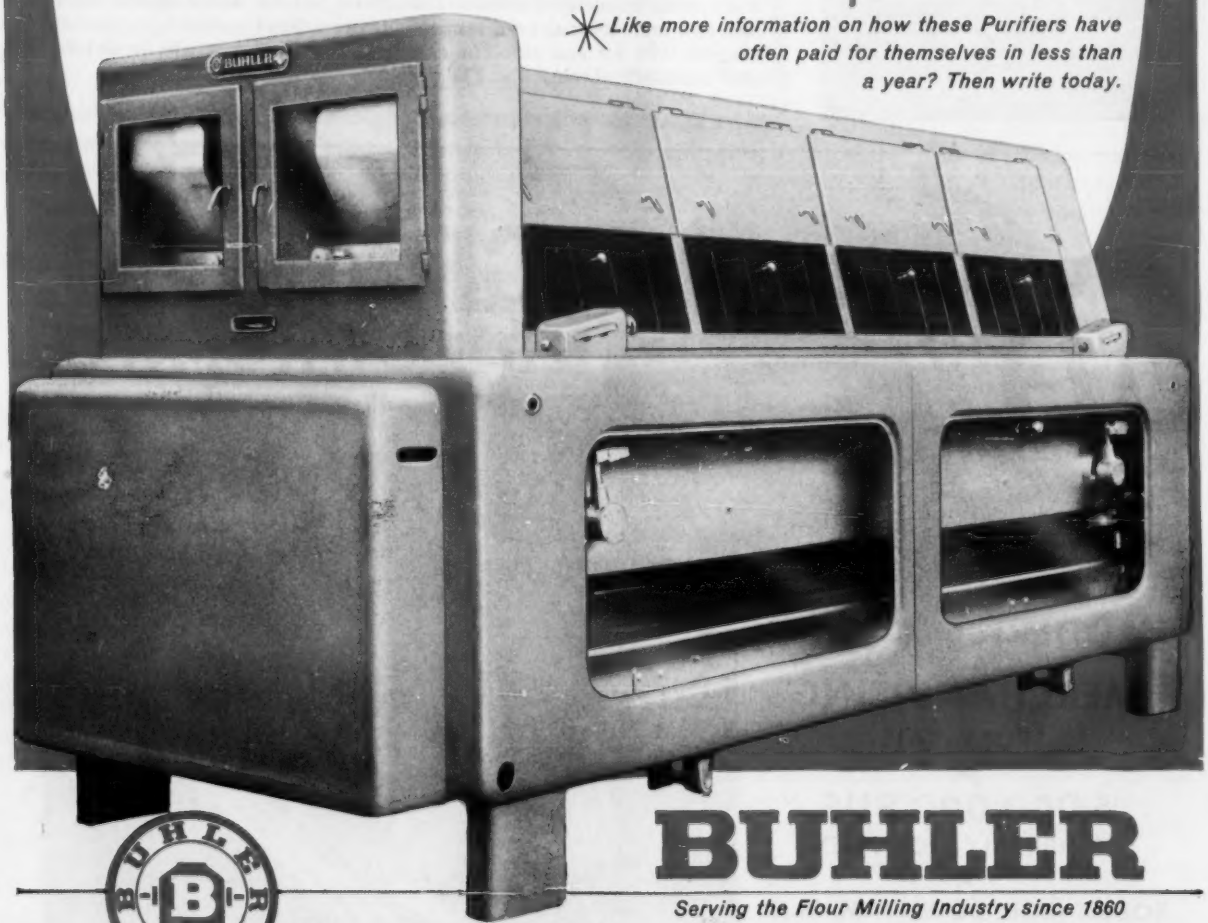
And here are just a few of the *other* important advantages you get when you switch to BUHLER *Triple-Deck* PURIFIERS.

- Highest percentage of clean, low-ash middlings . . . because middlings are classified by quality as well as size . . . and because the sub-divided air-hood with individual covers above each sieve give unequalled accuracy of air control.
- No need for re-purification under normal conditions. With 3 decks, a single pass does the job.
- Three decks of sieves permit more separations than is possible with 1 or 2-deck purifiers.
- Sieve cleaning is completely automatic and trouble-free. Frames are equipped with silk-tightening device.
- Flow fluctuations caused by changes in wheat quality are easily seen and corrected. Sieves are interchangeable while machine is running.
- Dependable operation and less maintenance because fewer moving parts than any other purifier. Simple BUHLER drive needs only ½ hp.
- Oscillating troughs convey purified stock gently with no attrition of flour.
- Easy to install and operate.



Triple-Deck PURIFIERS such as the Model MQRC shown here, were developed and are manufactured *only* by BUHLER.

✳ *Like more information on how these Purifiers have often paid for themselves in less than a year? Then write today.*



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Serving the Flour Milling Industry since 1860

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4207 Nicollet Ave., Minneapolis 9, Minn.

Sprout, Waldron & Co., Inc.
12 Logan Street, Muncy, Pennsylvania

Buhler Brothers, (Canada), Ltd.
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Our brands have become identified with quality the world over . . . Extensive experience with top quality wheats from Montana, Idaho, Washington and Oregon milled in the largest flour mill on the West Coast means flours of consistent uniformity and highest quality.

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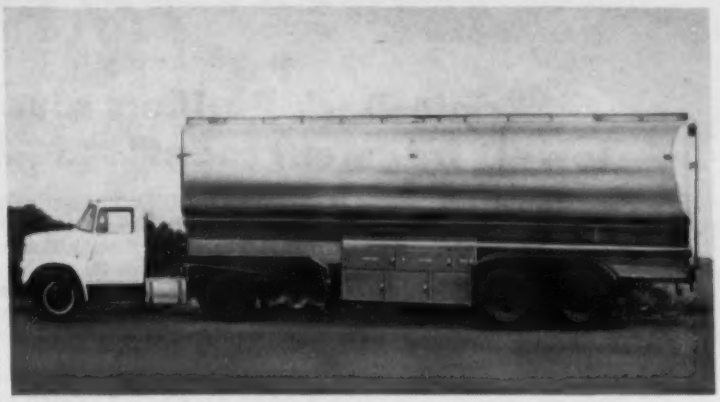
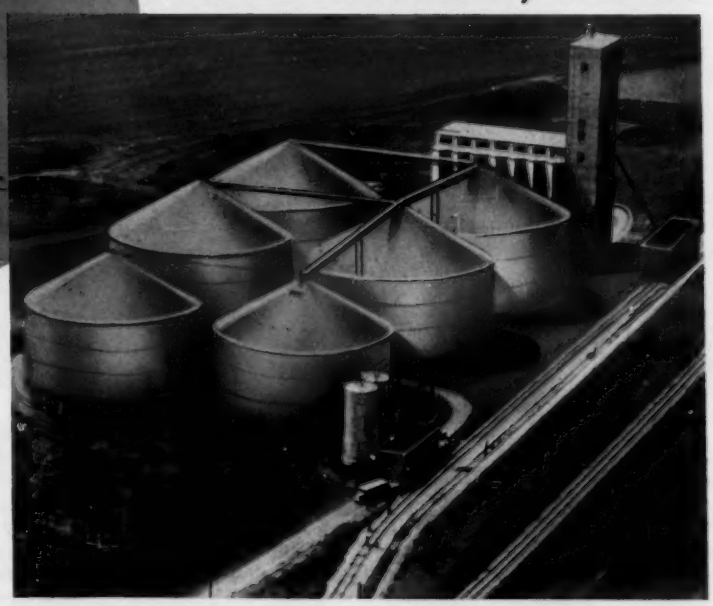


A NEW TRANSPORT TRUCK especially designed for use by the flour industries for bulk handling in volume from mill or rail siding to plants, is introduced by the Fluidizer Co., a division of Daffin Corp., Hopkins, Minn. The completely equipped truck is reported to have distinct advances taking advantage of air dynamics. The tank is made of aluminum and available in 1,200 and 1,400 cu. ft. capacities. Each of the two tank compartments has three air-activated discharge sections and air in each section may be shut off individually. Equipment includes valve with variable speed drive plus blower, plus separate blower for discharge sections, and hoses and fittings. Either or both blowers may be used in unloading and in-plant conveying. Conveying equipment is mounted under truck in enclosed cabinet. The control panel is sealed against water and dust and external hose connections are cabinet enclosed to prevent clogging with ice and dirt. The new bulk flour transport will be distributed nationally through the Fluidizer Co.

NEW ★

N. D.
S. D.
MINN.

G-F GRAIN CO.
GRAND FORKS, N. D.



MODERN STORAGE
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INSIDE SCIENCE

The Vital Story of MACARONI* ENRICHMENT

by Science Writer

This is the fourth article in a series devoted to the story of cereal enrichment

Dramatic results have been recorded about the value of enrichment in improving health. From the United States, the Bataan peninsula in the Philippines, Newfoundland and many other parts of the world comes word of the great benefits which result from enrichment.

For years, some forward-looking manufacturers of macaroni and noodle products have used enrichment to make their good foods better. They know that enrichment restores important vitamin and mineral values which are unavoidably lost in milling, and they recognize their responsibility to provide the greatest health-building benefits for the public.

Enrichment is really a simple process. It adds the following essential elements to the food during manufacture.

Thiamine—also called vitamin B_1. This vitamin helps to build physical and mental health. It is essential for normal appetite, intestinal activity and sound nerves.

Riboflavin—also called vitamin B_2. This vitamin helps to keep body tissues healthy and to maintain proper function of the eyes. It is essential for growth.

Niacin—another "B" vitamin, is needed for healthy body tissues. Its use in the American diet has done much to make a serious disease called pellagra disappear.

Iron—is a mineral used in all enrichment. It is essential for making good, red blood and preventing nutritional anemia.

Products made from semolina may be enriched by two methods. One uses small square wafers which contain all the vitamins and iron necessary to enrich 100 lbs. The wafers break up in a small amount of water which is then added to the paste. For manufacturers who use the continuous press method, a powdered concentrate of the vitamins and iron, called a premix, is available. This is added by a mechanical feeding device.

*Macaroni is used here in the generic sense. It includes all alimentary pastes: macaroni, spaghetti, pastina, noodles.

These are the minimum and maximum levels, in milligrams per pound, required by the Federal Definitions and Standards of Identity for enriched alimentary pastes.

	Min.	*Max.*
Thiamine (vitamin B_1)	4.0	5.0
Riboflavin (vitamin B_2)	1.7	2.2
Niacin	27.0	34.0
Iron	13.0	16.5

NOTE: These levels allow for 30% to 50% losses in kitchen procedures.

Nowadays scientists are able to "build" duplicates of many of Nature's essential complexes in the laboratory. This has happened with many vitamins. First the chemical composition is learned and the pure substance is isolated. Then a "duplicate" is made which is identical chemically and biologically with Nature's product. A vitamin is a vitamin regardless of its source just as salt is salt whether it comes from a mine or is evaporated from the sea. So efficient is large scale manufacturing that vitamins are sold at a lower cost than if they were extracted from natural sources.

The Hoffmann-La Roche people, who produce a good percent of the vitamins used in enrichment, use amazingly complex processes with scientific production controls. This requires modern, special equipment filling whole buildings, each one a city block square and many stories high.

The combination of scientific research, thorough know-how and mammoth manufacturing processes—plus the far-sightedness of leaders in the macaroni industry—is helping vitally to make good macaroni products better.

This article, reprints of which are available without charge, is published as a service to the macaroni industry by the Fine Chemicals Division, Hoffmann-La Roche Inc., Nutley 10, New Jersey. In Canada: Hoffmann-La Roche Limited, 1956 Bourdon Street, St. Laurent, Montreal 9, P. Q.

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The Oldest Flour Brand in Kansas
More than eighty years at the top of the fine quality list
The Hunter Milling Co.
Wellington, Kansas

Lyon & Greenleaf Co.,
Incorporated
Millers of Quality Soft Wheat Flours
Since 1866
LIGONIER, IND.

PAPER SACKS FOR MILLERS
The Chatfield & Woods Sack Co.
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Manufacturers of
CORN FLOUR - CORN MEAL
CORN SPECIALTIES

Moore-Lowry Flour Mills
INCORPORATED
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PRECISION-MILLED FLOURS

We specialize in designing and engraving for Millers and the Grain Trade
Holland Engraving Co.
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RUNCIMAN MILLING CO.
MANUFACTURERS OF FINES
MICHIGAN SOFT WHEAT FLOURS
Plain and Self-Rising
IONIA, MICH. PHONE 65

RED WING FLOUR
Milled in Minnesota for Over 40 Years
THE RED WING MILLING CO.
Red Wing, Minn.

Standard Milling Co.
Millers of
Pep High Gluten Staten Island Best
Bakery Flours

Canadian Exports of Wheat Flour

(Figures in Sacks of 100 lb.)

	1959-60†		1958-59*	
Commonwealth countries:	July	12 Months	July	12 Months
U. K.	473,909	6,865,563	530,260	6,024,022
Africa—				
British East Africa	200	2,010	320	620
Federation of Rhodesia & Nyasaland	1,264	11,717	2,250	11,057
Gambia	.....	7,016	.....	7,008
Ghana	102,382	773,134	62,512	602,284
Nigeria	25,316	232,128	15,545	88,367
Sierra Leone	12,187	144,951	20,753	127,189
Asia—				
Aden	560	3,930	.....	.....
Ceylon	.....	614,446	335,552	973,881
Hong Kong	29,108	307,538	25,175	265,083
India	.....	.....	.....	850
Kuwait	1,120	9,044	.....	.....
Malaya and Singapore	14,434	245,293	20,509	199,590
Other British East Indies	534	1,136	.....	756
Pakistan	.....	7,908	.....	150
Europe—				
Gibraltar	560	18,032	3,360	19,376
North America—				
Bahamas	2,345	116,211	6,953	114,232
Barbados	4,740	106,233	13,330	136,158
Bermuda	2,291	47,321	2,605	48,880
British Honduras	916	6,250	929	8,581
Jamaica	58,935	715,640	51,150	716,358
Leeward and Windward Islands	29,760	461,064	31,451	450,155
Trinidad and Tobago	74,081	818,280	59,849	707,716
Oceania—				
Fiji	.....	5,395	870	7,340
New Zealand	.....	40	.....	.....
South America—				
British Guiana	32,515	139,011	12,923	86,291
Total commonwealth countries	867,165	10,959,311	1,186,296	10,595,944
Foreign countries:				
Africa—				
Azores and Madeira	1,932	7,075	4,423	13,190
Belgian Congo	13,965	258,447	43,235	277,166
Egypt	.....	.....	.....	64,378
Liberia	1,473	10,512	2,661	8,338
Morocco	.....	.....	.....	1,292
Portuguese East Africa	.....	1,515	400	2,061
Portuguese West Africa	5,804	51,049	5,699	37,104
Asia—				
Arabia	.....	8,381	1,190	23,828
Indochina	.....	66,394	.....	.....
Indonesia	.....	137,524	.....	.....
Iran	100	655	.....	195
Japan	88,850	507,182	49,063	508,566
Jordan	.....	.....	.....	40
Lebanon	2,440	19,889	993	381,782
Philippine Islands	167,079	2,025,235	37,447	1,319,417
Portuguese Asia	14,128	85,348	15,281	96,127
Syria	.....	1,485	.....	1,360
Thailand	20,749	156,077	10,806	146,040
Europe—				
Belgium	6,720	65,058	.....	100,858
Denmark	200	2,072	200	1,040
Germany, Federal Republic	.....	897	.....	.....
Greece	176	2,158	.....	2,052
Iceland	.....	4,834	700	6,443
Italy	.....	.....	.....	878
Netherlands	.....	1,085	100	2,520
Portugal	.....	7,854	839	24,632
Sweden	330	770	440	880
North America—				
American Virgin Islands	.....	.....	.....	150
Costa Rica	25,230	310,835	13,075	211,427
Cuba	28,420	80,258	35,344	164,040
Dominican Republic	5,050	103,125	27,151	290,587
El Salvador	14,758	150,551	6,376	164,698
French West Indies	350	1,850	250	3,580
Guatemala	1,700	40,382	6,176	112,541
Haiti	.....	720	100	20,890
Honduras	4,700	27,304	5,023	34,456
Netherlands Antilles	675	49,971	6,745	68,708
Nicaragua	12,867	144,895	8,700	137,062
Panama	11,852	132,380	10,500	131,485
St. Pierre and Miquelon	150	7,119	200	8,993
U. S.	45,338	664,657	43,973	717,178
Oceania—				
French Oceania	.....	181	.....	400
U. S. Oceania (Guam, etc.)	.....	4,250	.....	525
South America—				
Bolivia	.....	100	.....	.....
Brazil	.....	600	.....	.....
Chile	226,041	226,741	7,000	15,100
Colombia	.....	1,603	150	109,413
Peru	300	2,350	400	10,151
Surinam	4,511	35,027	3,316	41,475
Venezuela	200	1,845	185	282,277
Total foreign countries	706,988	5,408,140	348,140	5,545,323
Total all countries	1,573,253	16,267,451	1,534,436	16,141,267

*Revised. Compiled by Ontario Flour Millers Assn.
†Preliminary.

What should a baker expect from his flour supplier?

THREE THINGS: experience, integrity, ability. Your flour supplier should have all three. How does Russell-Miller measure up?

Few flour millers have more years of experience than Russell-Miller. For more than three-quarters of a century Russell-Miller has specialized in the milling of fine flour. These years have involved us in every problem and accomplishment in the baking industry.

And not only does Russell-Miller have this greater experience in flour production, the men who call on you have a record of experience unmatched by any other milling company. The average length of service of our sales representatives is *18* years. These men have dedicated their entire lives to the flour business.

Integrity? This is the most important quality. It is integrity that leads a company to serve you honestly and energetically. It is the kind of quality that prompts bakers to rely on Russell-Miller Flours when they bake experimentally to set standards for their line.

It is the kind of moral responsibility that prompts Russell-Miller to maintain stringent quality control, to make sure that an inferior product never leaves our mills.

It is the kind of moral responsibility that prompts us to support major crop improvement associations—in an effort to make sure the best possible wheat is being grown for your flour.

And what about ability? This is the factor that makes it possible for an experienced and morally responsible miller to really *do* something constructive to help bakers.

Russell-Miller *has* the capacity to make effective contributions to baking. We are one of the world's largest milling companies, with elevators and mills strategically located in the best wheat areas. We have available to us one of the world's greatest storage capacities; we have ready-at-hand at all times just the right wheats you need for your flours.

Russell-Miller has the resources to maintain the very latest milling machinery and methods, to assure you just the right flour. And these resources enable us to send specialists every year into the heart of the wheat growing areas in advance of the harvest to collect wheat samples which are experimentally milled. Result? We know exactly which wheat to buy for the exact type and quality of flour you need.

What should a baker expect from his flour supplier? Experience, integrity, ability. The next time you order flour, check off these qualities in your mind. Then ask yourself if your flour supplier measures up to Russell-Miller.

RUSSELL-MILLER Milling Co.

specialists in the milling of fine flours

MINNEAPOLIS 15, MINNESOTA. Millers of Occident, American Beauty, Producer, Powerful and other superb Hard Spring, Hard Winter and Soft Wheat Bakery Flours.

FLEX-A-FOAM Dust Masks

- **Ideal for Hot Weather.** Filter's porous action absorbs and actually exhales body heat.
- Flex-A-Foam's lightweight (only 1 ounce complete) makes it cool and comfortable to wear—not hot and cumbersome like old-fashioned respirators.
- Flex-A-Foam is easier to breathe and talk through than an ordinary pocket handkerchief — does away with that stuffy, smothered feeling.

UNMATCHED ECONOMY

Flex-A-Foam is the lowest priced **quality** respirator on the market today.

Flex-A-Foam's washable filter outlasts throw-away type by more than 100 to 1.

Fewer filter replacements with Flex-A-Foam Dust Masks mean fewer lost production hours.

Your best *Ounce of Protection* against Irritating Dust

Sample Only
$1.45
postpaid
(Industrial price only)

FLEX-A-FOAM DUST MASK ®

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BUY *and* SELL *through* WANT ADS ...in... The Northwestern Miller

Day Dust Filter Licensed Abroad

The Day Co.'s patented "RJ" dust filter is going abroad in a big way, thanks to a new manufacturing and selling arrangement between the Minneapolis company and the English mill engineering firm of Henry Simon, Ltd.

Already used widely in the U.S. and Canada to control dust in the milling, grain, chemical and wood processing industries — to name a few — the Day Co. has licensed Henry Simon to manufacture and sell the versatile filter throughout the world, exclusive of Canada and the U.S.

A. B. Osgood

A. B. Osgood, president of the Day Co., in explaining the latest business arrangement, expressed the opinion that today, more than ever before, industrialization throughout the world is creating new problems that have to be met with new ideas and equipment —which brings his company's "RJ" dust filter into the picture. «

MIDDLE EAST FLOUR

Two large shipments of flour for delivery to Middle East ports recently were loaded aboard ships at Toledo Overseas Terminals. The Nedlloyd Line freighter Salatiga loaded 714 tons of flour being sent by Church World Service, New York, to the Ministry of Social Welfare in Aquaba, Jordan. The Zim-Israel Line vessel Tappuz, the first Israeli ship to visit Toledo this year picked up 600 tons of flour being sent to Israel by the United Jewish Joint Distribution Committee, also located in New York. «

Dannen Covers the Midlands

Strategically located, Dannen furnishes all types of top-quality milling wheat from points throughout the entire winter wheat area. Over 25 million bushels of storage space in terminal elevators and twenty-six country stations is your assurance of dependable Dannen service.

Experienced wheat buyers, skilled in meeting the most exacting requirements, are anxious to serve you. Call today.

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GRAIN & JOBBING DIVISION—DANNEN MILLS, INC.

Veteran Reviews Flour Packaging, Sales Evolution

The last four decades have seen many changes in flour packaging and merchandising, and probably no one is more qualified to review this era in retrospect than R. P. (Rube) Freeman, Ft. Worth territory manager for Burrus Mill & Elevator Co., who has observed the marketing evolution since the early 20's. "It's been an exciting 40 years of continual change in the grocery business and it's more challenging today than it was when I first started in 1920," he reflected on the eve of his retirement at a luncheon staged by his co-workers in Dallas.

R. P. Freeman

The veteran flour man noted that there was no such thing as a supermarket in those days although there were two local chains comprising 42 small stores serviced independently. Sales were made direct to the individual stores and flour was delivered directly by one of Burrus' delivery trucks from the mill in Ft. Worth, he explained. There was little or no bread sold through grocery stores in the 20's and flour was a major item in the store.

"We sold Light Crust Flour to everybody in Ft. Worth, but in the outlying counties a flour brand was sold on an exclusive basis and a retailer could really build up his trade with a good flour brand. Most out-of-city purchases were full cars," he added.

Commenting on packaging, he said, it was about 1940 when the size structure of flour was changed. "When I started selling flour it was packaged in 12, 24 and 48-lb. sacks. Then we added a 3-lb. and a 6-lb. size. But about 1940, all the millers came out with 2, 5, 10, 25 and 50-lb. sizes."

Mr. Freeman saw today's method of central buying and warehousing as far more of a challenge to salesmen than calling on individual stores.

"Each sale is of such importance that you have to give it everything you've got. So now you have the challenge of selling the buying committee plus the continued work with the retail stores which is still mighty important to successfully selling a product," he contended.

This old-line flour man is not planning a life of complete leisure in retirement. He will serve as a director of Security State Bank in River Oaks and work on starting another new bank. Also, he probably will continue to be seen in grocery stores from time to time, particularly visiting four accounts that have been in business in Ft. Worth for the span of his active career: Henry Law, J. R. Sisk, L. O. Fuqua and Leonard Bros. «

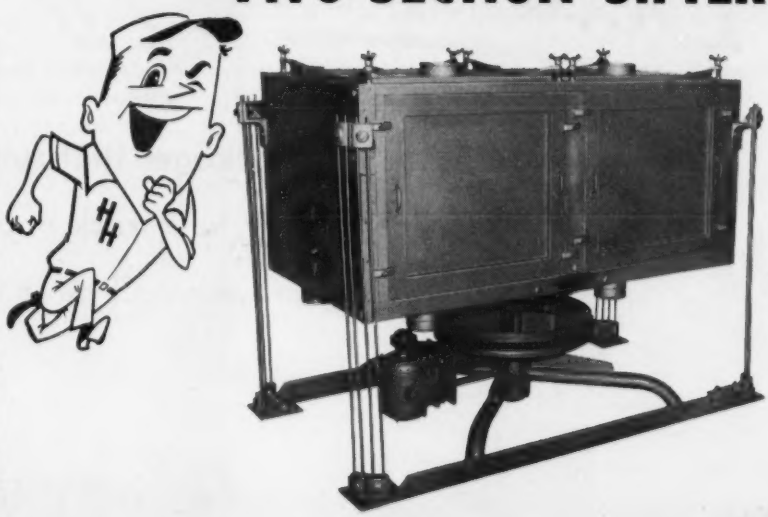
FACTS
The ABILENE
FLOUR MILLS COMPANY
ABILENE · KANSAS

Our milling plant has been completely remodeled and modernized in the past three years

CAPACITY-4,000 CWTS.
GRAIN STORAGE
4,700,000 BUS.

HUSTLER

Compact Floor-Mounted
TWO SECTION SIFTER



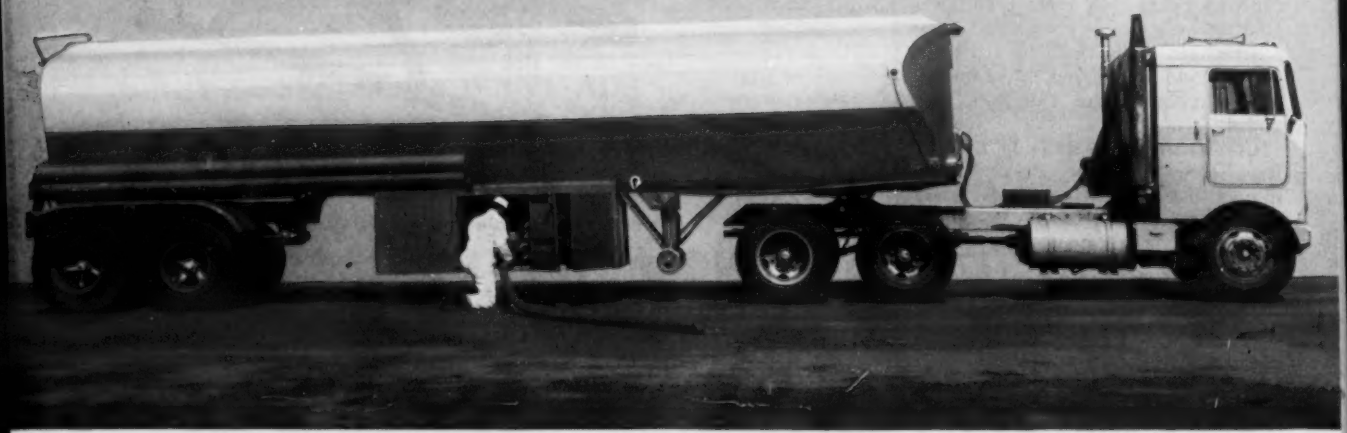
NOW—A floor-mounted two section sifter that is sanitary—durable and economical. Has a steel box, unit type base with individual motor drive. All component parts are engineered for long, trouble-free service. Speed and throw are adjustable to meet the requirements of your stock.

Write for information, specifications and prices on all Nor-Vell products. We will custom build to suit your requirements.

N NOR-VELL INC.
FORT SCOTT, KANSAS
The Name That Means Better Sifting

Fast 3-way Delivery Helps Make Commander Larabee "Better to Buy from"

Pick the "package" that suits your needs... Air Slide® Car, bulk truck, or bag. Commander Larabee provides all three.

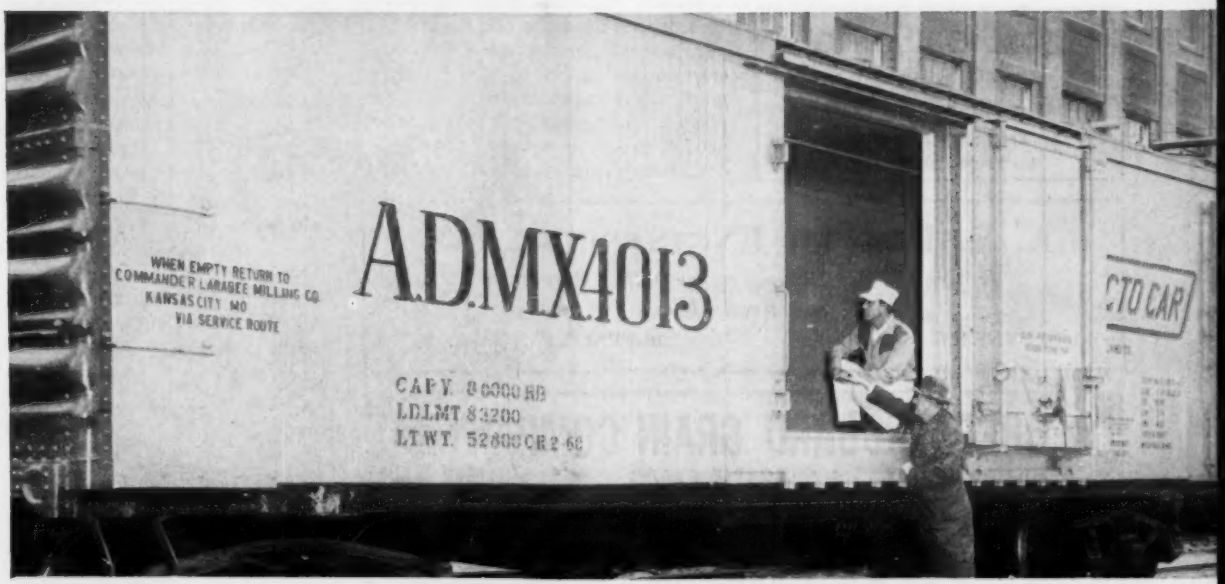


®Registered trade name, Fuller Company

1 BULK TRUCK. More and more Commander Larabee customers are capitalizing on convenient bulk delivery regardless of location. Fast, efficient transfer from bulk car to bulk trailer insures safe "sealed" delivery from mill to bakery. It is one more way you can receive dependable Commander Larabee flours in bulk.

2 **AIR SLIDE CARS.** Special ventilating techniques developed by Commander Larabee help keep condensation to a minimum. Proven bulk handling methods assure maximum car unloading, bin discharge and conveying efficiency. They're yours from Commander Larabee.

3 **ADMX.** Here's the best for shipping sack flour. Insulated cars maintain even temperature in transit. Sealed plastic lining and flush doors give a smooth interior which prevents bag damage. Next time you need dependable, top performing flour in bags, check on Commander Larabee ADMX.



Archer-Daniels-Midland

COMMANDER LARABEE DIVISION

MINNEAPOLIS • KANSAS CITY

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Customers in a sample of retail food stores shopped about 64% of the stores' displays, the U.S. Department of Agriculture reports. In fact, shoppers averaged less than 23 minutes shopping time and bought 13 items per store visit. (The average value per item purchased was 56¢.)

USDA's Agricultural Marketing Service researchers studied shopping patterns of 3,200 customers in 13 retail food markets for their figures.

A free copy of the report, "Customers' Shopping Patterns in Retail Food Stores—an Exploratory Study," (AMS-400) can be obtained from the Marketing Information Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington 25, D.C. «

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Rollermills—the Industry's Servants

Improvement of Them in the Future Provides Food for Thought, and Plenty of Discussion When Millers Meet

By DON A. FRANKLIN

ROLL SPEED

As mentioned previously, more and more interest has been taken recently in speeding up rollermills. The speeds that have become traditional in Europe since beginnings of the rollermill era are rather slow, somewhere around 350 rpm for the fast rolls used on break stocks and around 200 rpm for reduction rolls. In the U.S. rolls have been run at considerably higher speeds from the beginning, about 550 rpm being the average, but in certain cases speeds have been a good deal higher than this.

Don A. Franklin

Obviously there must be reasons for the operation of rolls at slow speeds just as there are reasons for desiring speed increases.

The acceptable reasons for running rolls at low speeds are summarized by:

1. Additional power consumption of fast rolls.
2. Certain mechanical difficulties of roller operation at high speeds.
3. Additional wear and tear on installed equipment.

Such reasons as the increase in operating temperatures of faster rolls and harmful effects on mill stocks have been ignored, as these are proven to be mechanically controllable, and it has been found possible to produce flour of approximately equal quality on both high and low speed systems.

The reasons for operating rolls at higher speeds are:

1. Reduction of invested capital in machines and buildings for a given capacity.
2. Reduced labor costs which will follow from the foregoing.

It will be hard to define limits within which roll speeds should be considered but, for the present, the speeds just quoted can be considered a minimum, although various continental countries are said to have used lower speeds in the past. The upper limit to which consideration should be given is not at present known, but for the present will be limited by experi-

Say the word "rollermill" at any technical conference and you're likely to draw plenty of comment on improvements made to date—or the lack of them. It's a good bet, also, that the discussion will bring out some divergent opinions on technical advancements expected in the future. In the accompanying article, Part II of Mr. Franklin's paper on the development of rollermills, written especially for THE Northwestern MILLER, he discusses roll speeds, results of some experiences abroad, problems of floating stocks, roller surface, feedings and settings. Mr. Franklin is head miller at Robin Hood Flour Mills, Ltd.'s Montreal plant.

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Rollermill Study (continued)

ence of the writer, that is a speed of 800 rpm for a 10 in. roll.

Attempts have been made by many independent experimenters to corroborate what seems to be a logical theory that the work done by a pair of rolls depends substantially on the periphery speed of the fast roll, the differential and the amount of load dealt with.

Russian Experience

An extremely interesting article which contained many references to roll speeds was published in the Milling Production section of The Northwestern Miller of Dec. 13, 1955, page 1A, entitled, "How the U.S.S.R. Adopted U.S. Milling Techniques," by N. I. Pesakhowich. This is a very thorough and comprehensive article, but owing to the large field covered, some questions unavoidably are left unanswered.

Mr. Pesakhowich did, however, describe the various studies and experiments directed by Prof. P. A. Kozmin on speeding up rolls in various complete milling units from the original 3½ meters per second (260 rpm 10 in. roll) to 6 and 7 meters per second. The loadings on some of the mills on which tests were run varied from 110 to 195 Kgs. per hour per meter of roll surface (or about 36-61 in. per sack of English capacity or .54 to 1.03 in. per cwt. American).

One problem that arose during these experiments concerned the roll chills originally installed in most of the machines which could not all be satisfactorily balanced for high speed operation. It had been common practice in Europe for many years to cast rolls with a hollow center formed by a core in the casting.

Non-Uniform Core

This core could never be made uniform, and often large quantities of clay or casting sand were left in the roll, which made satisfactory static balance impossible; as a consequence of this, high speed operation was quite unsatisfactory. After various rolls were cut open to establish this fact it was decided to produce only solid rolls for Russian use in the future, similar to those in use on American machines. Subsequent to this change no further difficulties were encountered.

This problem has of course been observed by many who operate rolls in the higher speed ranges, but the lately developed centrifugal casting techniques have certainly provided one positive answer to it.

It is recorded in this same article that the full speed increase was applied to some rollermills of 1890 vintage, constructed by the German firm of Luther, and this without any problems whatsoever. It seems that these machines worked very well at the higher speeds and came to no harm. The actual power usage in two mills where roll speeds were doubled is reported to have been identical, per unit produced, with that before the increase; it is suggested that this was due largely to the power originally used in turning the comparatively large number of machines used at the lower capacity.

During a recent visit to Canada, Mr. Damilan, head of the state department of wheat products in the U.S.S.R., gave the present speeds of rolls used in Russia as 9 meters per second (675 rpm, 10 in. roll) on break rolls, and 6 meters per second (450 rpm) on all reduction rolls, whilst both 9 and 10 in. rolls are said to be used. Other figures obtained from him indicated that slightly lower loadings are used on 1 Bk. rolls than a direct comparison of periphery speeds used before and after speed up would indicate. Possibly this fact may have some bearing on the question of power.

It is obvious that individual ideas of the loadings which should be put on a pair of rolls of given length and periphery speed vary a good deal, and it certainly seems from figures obtained from Mr. Damilan that loadings have been decreasing. Certainly break roll speeds have been increasing since the experiments forming the basis of the conversion in Russia were made.

The writer knows of one stand of 10x40 rolls of European manufacture that are operating as 1 Bk. at a speed of 800 rpm grinding a load of 220 bu. (13,200 lb.) of wheat per hour, and this operation requires anything from 30-50 hp depending on the wheat and condition of the rolls. This is a half as much again of what would be required under the same conditions with a more normal surface-speed combination; there can therefore be little doubt that the story is not all one-sided.

It would seem, in fact, that high speeds can be used to obtain a more effective roll surface and an increase in capacity over slow running rolls. This in turn could lead to a better job of milling with respect to extraction and grade percentages, possibly with less starch damage in grinding, and probably with a considerable increase in production compared to mills now using slow speed rolls.

Floating Stocks

It has been reported in those writings which have discussed American milling practices that many reduction rolls have so much load that the nip of the rolls contains a certain quantity of stock which seems to float there, various depths being reported of a half inch or more.

Many authors have rather summarily dismissed this phenomenon as resulting from too much load, too much grinding pressure, air currents created by high speed rolls, or even the inevitable result of using horizontal rolls. Recently the columns of "Milling" showed that one of the English milling engineers had filed application for patent rights for roll air scrapers, so we may safely assume that the problems of air currents around rollers are receiving study.

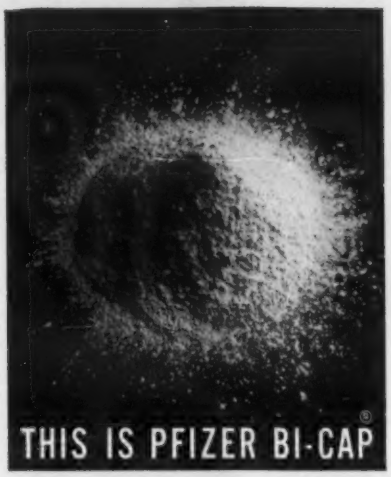
Friction Examined

Other writings that may be connected with this have examined the theoretical friction created upon stock by a pair of smooth rolls in an attempt to form some idea of what conditions will limit the speeds at which rolls can operate. The calculations are extremely complex, however, and it seems impossible they can ever take into account all the factors involved, such as variations in roll surface, pressure between rolls, sliding friction applied at various speeds, stock surfaces and air currents, and differentials. There are, however, many observations that can be made from experience of this action, including the following:

1. Rolls in which floating stock is observed appear to do a creditably even job of grinding. The feed seems to be drawn evenly between the rolls in most cases and tests seem to indicate there is no improvement in grinding when the floating is interrupted. This is possible by opening the rolls briefly, then closing again, which action usually prevents floating for a short period of time; such tests, however, can by no means be regarded as conclusive.

2. The air currents drawn through to exhaust the roll can be blocked off without stopping stock from floating, but the volume of air drawn into the roll and the direction of flow do have an effect on the problem.

3. Air scrapers can be fitted in contact with or slightly away from the rolls, and they definitely reduce the floating tendency, but heavier loadings appear to restore the original appearance in some tests made.



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4. Exhaust may be directed for application behind the air scrapers, reducing the tendency still further.

5. Additional stock introduced to a pair of rolls already operating with floating stock will build up the depth of stock gradually, although the entire load will still go through, up to a point where the space between the rolls is quite filled and the stock eventually runs over one chill.

6. Moisture content, wheat variety and wheat condition all seem to affect this behavior.

7. The level of stock can be reduced by reducing grinding pressure slightly.

8. If feed is backed up onto the back roll by a "gate" made so that feed is drawn out by that roll, very large capacities can be drawn between the rolls without occurrences of this phenomenon.

It also seems likely that floating stocks are materially influenced by the differentials used, most of the differentials in N. America being a good deal higher than the 1¼ : 1 popular in England.

Speed Conclusions

To return to the original concepts governing the operating speeds of rollers previously outlined, however:

Higher roll speeds are not definitely proven to cause increased power consumption for flour produced, but this will be influenced by the types of bearings and transmission used, and since the cost of electrical power seems to be decreasing anyway (relatively) and the value of invested capital seems to be steadily increasing (to those who are making new installations), any thoughts concerning power will no doubt undergo commensurate changes.

There are mechanical difficulties found in operating European rolls at high speeds, but these have been rather over-rated and the high speeds at which American rolls have been running for over 50 years prove that even higher speeds should be possible on newly designed machinery.

BEARINGS

The majority of roll bearings fitted to rollermills have not been of the anti-friction type, but roller bearings certainly have much to commend them and seem to be increasingly popular. There always have been a number of problems attendant upon their use, however, and some of these have been centered around the dismantling and re-grinding of rolls. Whether these problems have been entirely overcome or not, the roller bearings are precision equipment and need a certain care in handling that means more skill and time to each roll change.

Most other bearings that have been proven successful have been either sleeves or split halves with collar oiling.

On the heavy duty American machines, split Babbitt have been the most popular, and they offer the advantage of adjustments to fit on the journals and easy re-metaling. They are also the easiest bearings to remove from the rolls under any conditions. The rather loose fit attained by this type of bearing seems quite satisfactory in grinding, providing the rolls do not start to vibrate for any other reason.

Sleeve bearings, of either Babbitt or phospher bronze, have also found a wide popularity; they are more accurately fitted than the split type but they cannot be adjusted and are often very difficult to remove if the roll journal seizes to them.

Plastic sleeve bearings are used in some of the very heavy steel rolling mills and could no doubt be successfully adapted to flour mill rolls; they can, it is reported, successfully use water as a lubricant. There are some flour mill rolls with standard bearings that have been arranged with automatic circulating oil lubrication through the use of pumps and filters, and it seems that where this is desired the plastic bearings might be utilized with a very simple running water system that would be useful for cooling the bearings in a hot climate, in addition to providing lubrication. It is likely, however, that such an innovation would require certain small changes to the roll design.

ROLLER SURFACE

In the early days of rollermilling porcelain was considered a good material for use in reducing endosperm to flour, and there are occasional reports that such rolls are still in use. But there are few millers who have first hand experience with any material other than the chilled iron rolls that have become the standard for the industry.

It is recognized that the surface of a smooth grinding roll should have a somewhat porous texture, and the best surface so far available for "smooth" rolls seems to offer itself naturally when newly ground rolls have been operated for a week or two on head end reduction stocks. Unfortunately, continued grinding of these hard stocks will produce deep scratches around the circumference of the roll and grinding efficiency will eventually start to fall off until the roll changes are again made. On these

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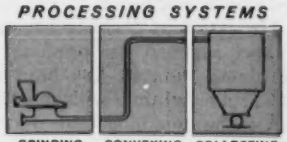

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stocks operating generally around the middle of the reduction system, rolls seem to maintain a satisfactory grinding surface for many years, while on the tail end stocks the surface becomes quite polished.

In America it has been very popular for many years to use finely corrugated rolls for grinding heavy loads of the larger hard stocks at the head of the mill. These corrugations are quite different from any available in Europe, and the reason is the different methods of roll corrugating employed on the two continents. When European rolls are corrugated, the tool used is shaped to make only one flute with each traverse of the roll carriage, thus the operating edges of each corrugation are at a sharply finished angle. American tools, however, are so made to cut several flutes with each traverse of the roll carriage, and with such a multiple tool the profile of the tooth can be in any combination of curves desired.

For grinding middlings, therefore, a round topped tooth is usually selected, with somewhere around 36 or 40 corrugations to the inch. By increasing the differential from the normal for smooth rolls it then becomes possible to grind much heavier loads of flour with lighter pressures than on smooth rolls.

A problem arises with these rolls, however: It is exceedingly difficult to produce a perfectly parallel smooth roll which is absolutely concentric with the journals, but when the roll is corrugated this difficulty is multiplied many times over. In actual practice one corrugating firm found that the pressures exerted by their corrugator removed all trace of chamfers from the rolls, and they resorted to regrinding chambers after corrugating.

Another difficulty with the multiple corrugating tool is that the join in flutes, when completing the roll corrugating, is extremely difficult to line up. (This problem would not occur with the single cutting tool, as the width of the tooth is actually "indexed" in evenly spaced degrees around the roll.)

These problems certainly are not unsolvable, but to achieve satisfactory results a good deal of experimentation and skill is necessary.

The action of finely corrugated rolls is also inclined to produce higher ash flours because less bran flattening is achieved than with smooth rolls, but if the middlings are very clean this may not be objectionable. One also has control of the severity of the grinding by modifying the spiral used, which is usually a half inch to the foot or more. The working life of these rolls may be anything from one or two months to a year on hard wheats, but certainly they are bound to require more frequent roll changes than smooth rolls.

In the article on Russian milling previously quoted, it was noted experiments clearly showed that higher differentials than those commonly used in Europe give less flaking at higher roll speeds and, in fact, the most commonly used differential on smooth high speed reduction rolls has been about 1½:1, while on the corrugated rolls mentioned 2:1 is more frequently used; once again these figures are best related to the type of wheat being milled.

Experiences in this respect, however, do point up the need for differentials that can be rapidly changed for experimental purposes and, when such equipment is available, it can soon be seen that small differences such as would occur with slipping belts are really of very little consequence.

Clearances

Many expressions have been used with somewhat gay abandon in this article so far that will be more or less unfamiliar to some readers; for instance Americans use the term roll corrugating, while the British seem to favor "fluting." But however purist one's outlook, it would be hard to mistake the meaning of such terms in flour milling. There are, however, two or three expressions so far not dealt with that could cause misunderstanding. In the first instance, the ends of the rolls to be corrugated are commonly ground to about a 45° angle to facilitate entry of the tool and to prevent breaking of the ends of the tooth. This operation suffers from a number of names, and it will be left to others to decide which is most attractive for the job.

It is possible also to "crown" or "taper" rolls from the middle to the ends to compensate for deflection or unequal heating of the roll bodies; this is commonly done in some industries, but most of the rollers made for flour milling are made as follows:

The "taper" or "chamfer" normally applied to smooth or finely corrugated rolls is started a short distance back from the ends of one or both rolls and continued to give a total clearance of something in the line of one thousandth of an inch at the end. To add to the confusion that could develop from the foregoing embracing remarks, one roll manufacturing company reports that it has supplied rolls where the taper starts 6 in. back from the ends of the rolls and others where the starting point is only 1½ in. back from the ends. The final amount of this taper has been from .001 to .003 in. on each roll, and all of these rolls have been to customer specifications. Presumably all of them have been doing more or less the same kind of work; these measurements also apply indiscriminately to 9x30 in., 9x36 in. and 10x40 in. rolls.

There are diverse reasons offered for putting taper on a pair of flour milling rolls, and it is peculiar that many writers so far have tended to favor one without really giving much credence to the remainder. From summarizing various reports though, the following seem to be the main reasons for needing taper:

1. Journal heat which reaches the ends of the rolls only (on a chilled iron roll, a 17° F. raise in temperature will cause .001 in. expansion in the metal).
2. Deflection in the centers of the rolls caused by the pressures used.
3. The greater mass of metal in the ends of hollow rolls causes uneven expansion.
4. Wear characteristics.

Having recorded these facts, and adding the fact that taper is still used on some rolls with anti-friction bearings and on some water cooled rolls, the issue of why it is used at all will be ducked by agreeing that chamfer, taper or crowning is certainly necessary to the operation of most grinding rolls.

In actual fact, it is extremely difficult to grind rolls so that surfaces are perfectly parallel and concentric with the journals, and it is even more difficult to apply an exact amount of taper to the ends of the rolls. It seems that in practice the taper must be applied by the judgment of the operator and measured afterwards; it might, as an extreme case, be possible to reach optimal standards in grinding flour mill rolls, but it is doubtful that millers would want to pay the increased cost.

Corrugated Rolls for Break and Scratch Stocks

Perhaps the metallic constituents desirable in corrugated rolls may be different from those found best in smooth rolls, as it seems that chromium plating will definitely extend the working life of some corrugations. It would doubtless be difficult to per-

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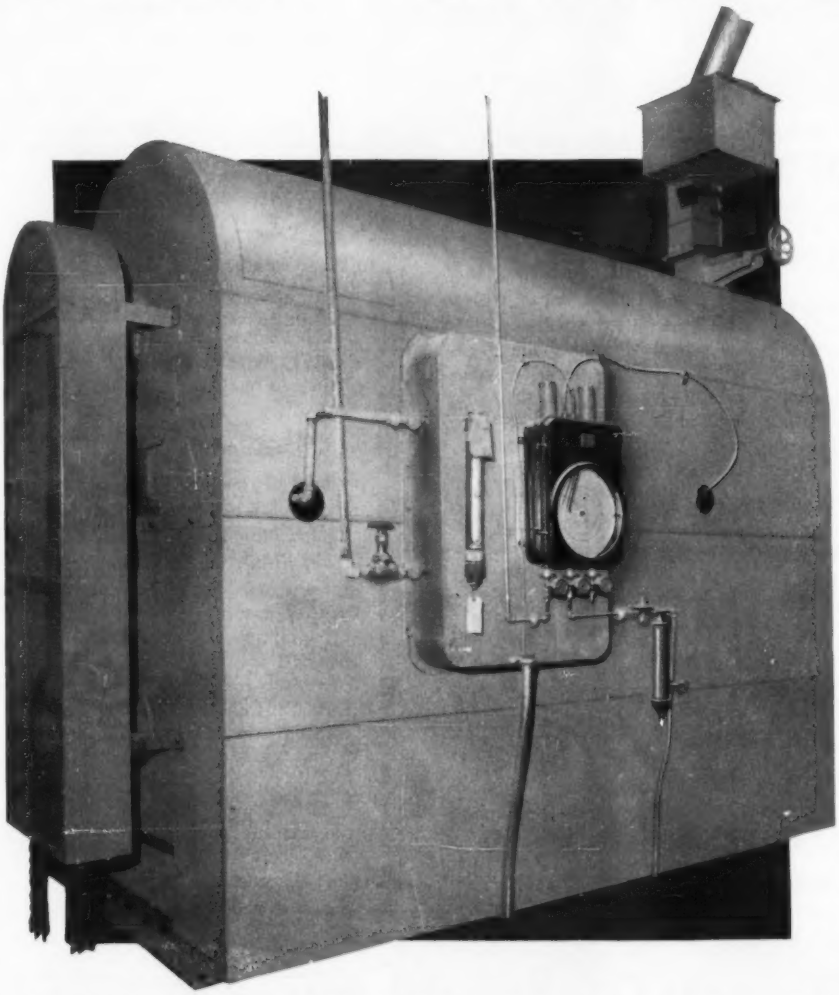

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suade millers to buy different types of roll chills, however, and there may be other reasons why this does not seem to have been done.

The design of corrugations put on European rolls can only be varied in the cutting angles and spacing, but with the multiple cut tool used in the U.S. any shape is possible. It is widely known that the American milling system calls for the operation of dull to dull corrugations on hard spring wheats, and under these circumstances it is doubtful there is much difference in milling results resulting from the design of cuts used. However, there certainly are differences when milling the thick-skinned, soft wheats or the semolina varieties, where sharp to sharp settings are more popular.

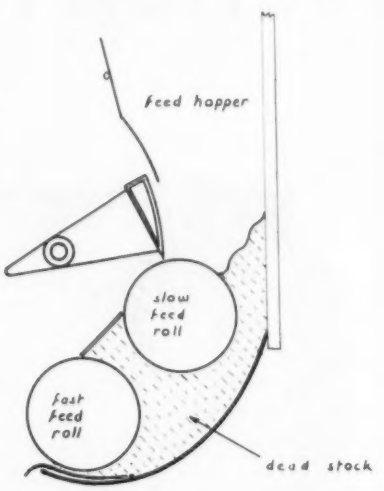
It is also a fairly common practice to vary the working positions of the rolls after a certain amount of wear has taken place, and since wear is bound to take place on the operating edges of all corrugations, the design of flutes used may well be less important than almost all of the other factors put forward so far, where wear does not influence results.

The amount of spiral employed on the break rolls is also inherent with each of the two different types of milling carried out on either side of the Atlantic. The American system calls for the use of about ½ or at the most ¾ in. to the foot, while in Europe the figure is closer to 2 in. to a foot. The effect of these widely different figures on the milling system is interesting, but for the present must remain outside the scope of this article.

ROLL FEEDERS

There have been many types of feeders successfully used in roller-mills but, as explained earlier, diagonal rolls are considered to need one device to spread and meter the feed and a second higher speed roll to throw the feed into the roll nip. In the case of wheat, it has been found quite satisfactory to spread the wheat above a roll traveling at the speed considered best for feeding the grinding rolls direct, and one feeder roll can certainly be eliminated without difficulty. With other coarse break stocks, where bulk feeds again do not require the slow speed roll for metering, the upper roll is frequently replaced by an agitator or distributing conveyor which prevents the stock from choking behind the feed gate; again, the lower roll will satisfactorily fulfill all other functions. With most stocks, however, two feed rolls are commonly used, the back roll drawing an even stream of stock from beneath the gate, while the front roll increases the speed of the stock to form a thin even curtain which is directed towards the grinding gap.

Diagram 5
diagonal roll feeder



These various arrangements have one major disadvantage in that a fairly large space is left behind and below the feeding mechanism where stock will accumulate without changing. (See diagram 5.) This means:

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DIVISION
F. H. Peavey & Co.
GRAIN SOYBEANS FLAX
Founded 1852
MINNEAPOLIS DULUTH

COMPLETE MILLING WHEAT SERVICE

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Flour Mills of America
INCORPORATED
GRAIN DIVISION
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1. The stock packs down and eventually makes the rolls hard to turn.

2. Stones or pieces of metal which appear in even the best-operated mills will jam behind the mechanism and can quickly wear the surface of the feed rolls before detection.

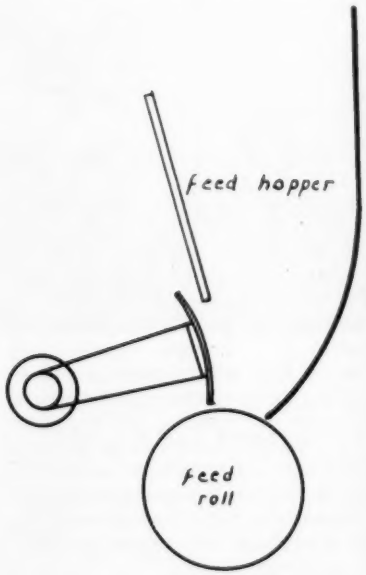
3. An infestation trap is formed which consumes a good deal of time in periodic cleanings.

Horizontal Rolls

Where horizontal rolls are used, the only function of the feed gate is to provide an even flow of stock above the grinding rolls, as a simple, stationary baffle can be used to deflect falling stock to exactly the desired point. Over the years, shaking feeders, high speed vibratory feeders and feed rolls have all been utilized on different models of rolls. Both vibratory feeders and feed rolls have proven quite successful, although feed rolls would normally be the cheaper and more simple installation. When only one feed roll is necessary it becomes possible to overcome the dead space that was considered objectionable by a slight modification in construction as shown in diagram 6. This particular layout is found to operate very well indeed.

During recent years, various patented methods of introducing feed into the grinding areas have been developed, some with the idea of presenting wheat to the grinding areas at a uniform angle, some concerned with the velocity of particles entering the nip, and others which have overcome various other factors such as air currents. The writer has had no first-

Diagram 6
horizontal roll feeder



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Installations FOR DUST CONTROL, VOLUMETRIC FEEDING AND PNEUMATIC CONVEYING

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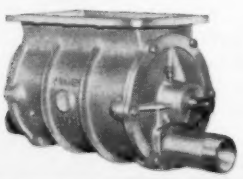
Bay State Milling Co.
Dixie Portland Flour Mills
Econo-Flo Bulk Flour Service
General Foods
General Mills, Inc.
Huron Milling Company
Ideal Baking Company
Iglehart Bros.
International Milling Co.
King Milling Co.
Lewis Bros. Bakery
Ogilvie Flour Mills Co.
Pillsbury Company
Ralston Purina Co.
Richmond Baking Co.
St. Louis Flour Mills



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WRITE FOR BULLETIN P-58
PRATER PULVERIZER COMPANY
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Horizontal Rolls (continued)

hand experience with these inventions, but since manufacturers do not yet fit them to new machines as standard equipment, the benefits derived from such innovations must incur certain liabilities.

It was inferred previously that it would be possible to use the slow roll as the means for drawing stock from behind the feed gate. This certainly seems to overcome some problems associated with air currents, but it would perhaps be very difficult to operate such a device satisfactorily.

Incidentally, where horizontal rolls are actually found to be operating with the "floating" stock referred to, the evenness of feed is quite irrelevant, as the action of the rolls is to keep the stock spread out just like a liquid.

ROLL SETTINGS

Most rollermills in use today are set by simple or double screw adjustments, which bring the rolls closer together or set them further apart against the action of a strong steel spring. Sometimes movements of the adjusting mechanism slightly change the pressure exerted by the spring, and sometimes this is controlled quite separately, but the actual grinding gap or the pressure used must be assessed by the experience of the operator, with or without the help of test sieving. There have been many ways put forward for setting rolls without resorting to either of these methods. The various inventions have included the following:

- Dial micrometers have been attached to the roll bearings in such a way as to register roll adjustments and movements.
- Pressure sensitive devices have been used to register the pressure applied between two roll journals on pressure gauges, one of which was mounted at each end of a pair of rolls.
- It has been suggested that a small electronic device could be used to rest on each end of a roll journal and record with extreme accuracy all linear movements on one end of the roll. Such a device also could be connected to a feed back circuit to operate electrical machinery for roll settings to achieve automation.

Some rolls have been fitted with thermometer heads or thermocouples underneath the grinding roll ends to register temperatures on dial gauges mounted on top of the rolls. These gauges enable the miller to maintain the rolls in even operation without sifting or feeling the stock.

All of the devices mentioned, however, are an additional complication to the standard rollermill, and none can tell a miller everything he needs to know about what takes place inside his grinding rolls. All of them are subject to various mechanical difficulties that render even the limited sphere of information they convey somewhat unreliable as to end results.

Recently, however, some manufacturers have supplemented their standard adjustments with a pneumatic or air setting device; with this device the actual pressure used on each end of a pair of rolls can be set by the pressure allowed to operate the master cylinder. This, by itself, is a very interesting development, as the miller can see what pressures are actually being exerted in the grinding. which is not possible with springs. Once again, however, such factors as uneven wear on corrugations or grinding surfaces, heat differences and surface contours of rolls in operation mean that the information obtained suffers from the same disadvantages as those previously dealt with. With the air set method, however, a further refinement becomes possible: The master cylinders are connected to a level device in the roll feed hopper to open and close the rolls as stock runs on and off, during start ups, shut downs and chokes.

Other manufacturers have used hydraulic pumps operated from the roll driving mechanism to open and close the rolls. Presumably these would be capable of much the same development as is possible with air settings.

No doubt many of the foregoing devices will continue to find favor in certain mills; in some cases, such as where skilled labor is almost non-existent for operating, they may be considered most necessary and most millers would like to have the facilities they offer. One of the chief drawbacks is the extra complication of the machinery involved, in particular that which must be removed or adjusted in roll changing. The increased price of these units must always be another consideration.

It would certainly be most interesting to know what pressure was being applied to the ends of the rolls, especially at the higher operating speed ranges, and rolls that open and close without attention have quite obvious advantages. But the over-riding aim of many millers is simplicity and the reduction of maintenance costs. To date none of the equipment mentioned has found universal acceptance.

REMOVAL OF AIR AND STOCK

From the earliest days of automatic flour mills it has been found necessary to remove some of the generated heat from the grinding operations. Since it also was necessary to draw off light dust that would otherwise blow into the mill, a suction or "exhaust" was applied to the roll stand.

In the earliest installations the suction trunking was designed for slow speed air and mechanical cleaning of the suction lines was necessary. The use of high speed exhaust eventually replaced most of these layouts, however, with a consequent reduction in the amount of space taken up, and a greatly improved operation with regard to sanitation.

The reasons for requiring exhaust from rollermills have not changed very much, and certainly keeping down dust is necessary regardless of other considerations. It is interesting to note, however, that mills which operate in dry climates have often found it necessary to add some form of mechanical humidification to roller floor air, and of course, where rolls are water cooled it should not be necessary to remove a great deal of heat with the air.

It is rather surprising that rolls, unlike purifiers, have never been built with self-contained dust collectors which would allow the return of the warm humidified air to the roll floor.

The trend today seems to be towards use of pneumatic elevation within the mill proper, and perhaps we will see little interest in roll exhaust in future. If pneumatics do, in fact, become the universal system, there seems little doubt that more methods will be developed which enable the stock to be drawn up out of the rolls, without the need for any space beneath the roll floor. The general introduction of driving methods which will make one mill floor altogether redundant will be tied in with this in the future. This certainly seems to be the most logical step forward.

In conclusion, the rollermill has changed very little in its function over somewhere near a century of time, but this certainly does not mean that progress has not been made. Changes are constantly being made to designs and various new thoughts appear every year. It was not intended herein to make a comprehensive summary of rollermill development, but rather to offer food for thought in an industry which has sometimes been accused of lack of any development or of making real advances commensurate with this age of scientific achievement in which we are living. «

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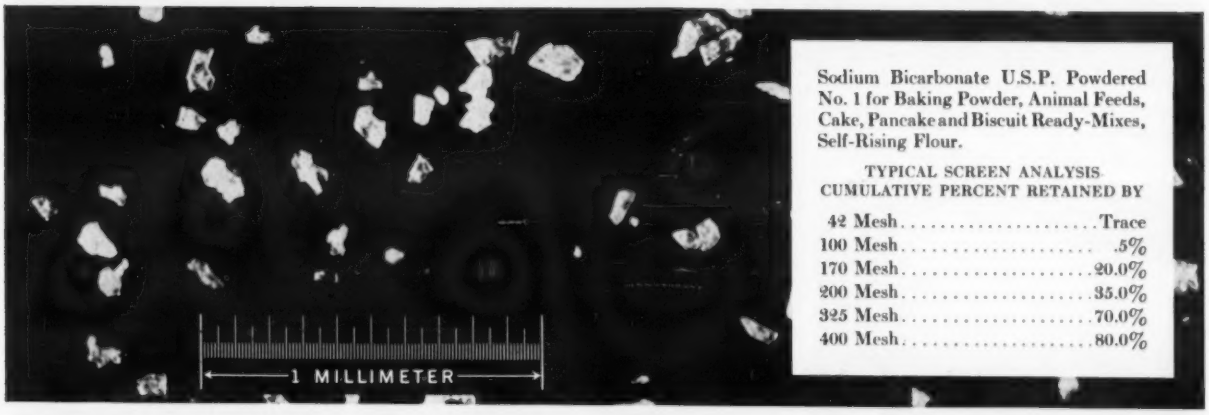

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200 Mesh	35.0%
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400 Mesh	80.0%

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TYPICAL SCREEN ANALYSIS
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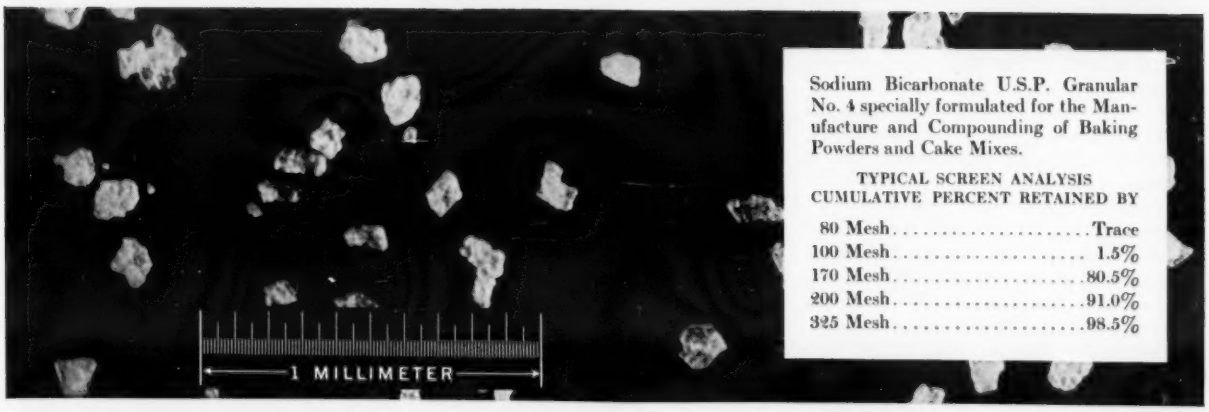
170 Mesh	20.0%
200 Mesh	35.0%
325 Mesh	70.0%
400 Mesh	80.0%



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Conveying Bulletin

A 16-page bulletin on conveying systems has been issued by the Day Co. It illustrates and explains efficiency gains possible with Day low density or high density conveying systems.

Typical arrangements are shown, along with several photographs of installations.

Circle No. 4590
on Reply Form for Details

Moisture Analyzer

Boonton Polytechnic Co., Inc., has introduced a high speed, general purpose, industrial moisture analyzer, its Model HFR-4B, designed specially for process or quality control systems in industries such as food processing. It employs a method of moisture determination by means of radio frequency power absorption and is claimed to afford laboratory accuracy under factory conditions. The instrument has a wide range of zero to 80% but is supposed to be accurate to .001%. Simple to operate, the moisture control instrument is rugged, compact, of unitized construction, and provides uniform, reproducible moisture measurements continuously in stream, batch or sampling techniques.

Circle No. 4591
on Reply Form for Details

Materials Catalog

A condensed catalog of vibratory materials handling equipment, vibrating parts handling equipment, power rectification equipment and mechanical shaft seals, among others, is available from Syntron Co. The product lines listed include vibrators, car shakers, car rappers, packers and jolters, hopper level switches, flow control valves, feeders, conveyors, spiral elevators, dry feeders and weigh feeding equipment, a complete line of vibrating screens, test sieve shakers and parts feeders. The catalog, No. 605, gives descriptions, data and specifications on all Syntron products. It shows products in operation and gives the latest listings of Syntron representatives. Copies are available without charge.

Circle No. 4592
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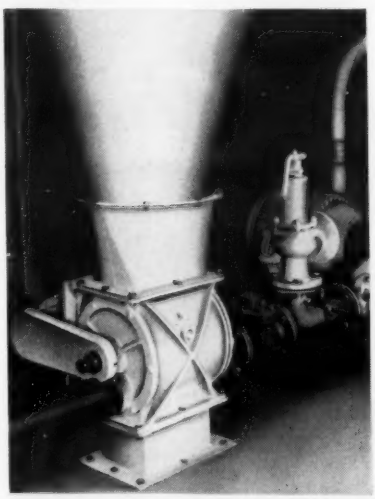
Feeder Valves

Two rotary feeder valves, specially designed to feed powdered and granular materials into pneumatic conveying lines, are being produced by Thomas Robinson & Son, Ltd. They are being marketed as separate units, or in conjunction with the company's



wide range of "Pneu-Flow" conveying systems. The rotary feeder type QNm (see photo), has been designed to overcome problems involved in conveying fine powdered materials in high pressure lines. It consists basically of a robust casing carrying a chain-driven multi-bladed rotor, the driving shaft being carried in roller bearings. Material fed into the pockets between the blades is discharged at the bottom of the casing where the blow-line is connected to the inlet and outlet ports. Air contained in the empty pocket is then discharged through a neutralizing port to prevent it interfering with the discharge of stock from the bin. The feeder valve, type PNm, has been designed to achieve an uninterrupted flow of granular materials into a blowing line, while having sufficiently fine clearance to eliminate air leakage. Although it is based on the same fundamental principle as the type QNm feeder, the material being fed to the blowline in this case passes through the base of the valve casing to a separate suitable connection mounted below. A neutralizing port is included to feed back air which would otherwise cause puffing in the bin. A self-contained motor drive is fitted, the motor and gear reduction unit being mounted on the side of the valve.

Circle No. 4593
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Telemetering Unit

Leyghton-Paige Corp. has developed a remote control telemetering unit with a series of thermocouples housed entirely within a high-tensile steel cable for maximum strength and longevity. The firm, which designs and manufactures temperature measurement devices for large grain storage installations, claims this inner housing method for the device reduces considerably the cost of maintenance. Ultra sensitivity of the unit's null-type indicators will register body heat of insects at a considerable distance, and will locate areas of bacteria growth through the same heat measurement principle, giving advance notice of heat build up so that grain can be dried and turned.

Circle No. 4594
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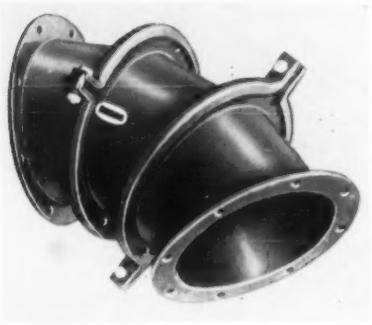
'Kleen Grain' Elbow

A three-section adjustable elbow with special clamp band connection has been introduced into the line of Kleen Grain elevator equipment manufactured by Huss & Schlieper. This elbow can be easily installed and adjusted to any angle by merely loosening the two bolts at each side of the two-section clamp band. No welding is necessary. With this type of connec-

tion plus Huss & Schlieper's new automatic butt-welding process, the new Kleen Grain elbow has a smoother in-



terior surface, allowing a better flow of materials and providing longer wear at critical points. The three-section elbow is available from Huss & Schlieper in 6 in., 8 in., 10 in. and 12 in. diameters.

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Flo-Tronics Data

A catalog sheet on the Flo-Tronics Fail-Safe Material Level Control Models L400 and L400-A has been issued by Flo-Tronics, Inc., and is available without charge. Design features explained include the fail-safe method provided by a transistor circuit in combination with the nature of the control signal; the method of generating the control signal by a circular six-pole ceramic magnet mounted on the motor shaft; and auxiliary winding on the shaded-pole induction motor, providing the small amount of power required by the transistor circuit, without overloading the principal motor winding.

Circle No. 4596
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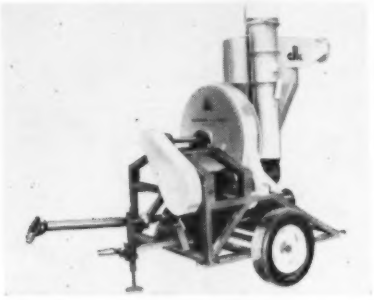
Grain Conveyor

Dunbar-Kapple has developed a power take-off Vac-U-Vator said to fulfill the grain industry's need for a compact, powerful pneumatic conveyor that will operate directly from a tractor. The PTO Vac-U-Vator is re-



portedly economical, mobile and efficient. The manufacturer states that it can be used for virtually any kind of grain transfer situation.

Circle No. 4597
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Inspection Light

Grain inspectors, terminal elevator operators and country elevator men will be interested in the Toledo North Light, a device to provide a perfect daylight—or "north" light—for mixing and blending of grains and buying of grains by the truckload at night. The Toledo North Light, distributed exclusively by Seedburo Equipment Co., was designed and tested thoroughly by Virgil McNamee, grain inspector for the Toledo Board of Trade. The lamp is in use now in the grain inspection departments in Toledo, Maumee, Sylvania, Fostoria and Lima, Ohio, and Detroit. Michigan State University uses one for seed analysis, among other work. Various grain elevators use the lamp when

mixing and blending for night truckload buying of grain, and for boat loading in Ohio and Michigan. Overall North Light measurements are 4 ft. in length, 1 ft. in width and 7 in. in depth. When properly installed, so that the diffusing glass is 34 in. above the grading table, the light on the table will measure 150 foot candles and approximately 7,500° Kelvin by the Weston Foot Candle Meter, Model No. 735, and the Gossen Color Temperature Meter. Since the North Light provides proper uniform lighting, it will result in uniform inspection, it is claimed. Complete information is available from Seedburo Equipment.

Circle No. 4598
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Electronic Scale

A three-platform electronic load cell truck scale that determines the load carried by each axle and computes the gross vehicle weight, without moving the vehicle, is announced by Toledo Scale, division of Toledo Scale Corp. Basically, this scale has three platforms which may be constructed to any size requirement. However, for most truck scale applications one 24 ft. by 10 ft. and two 10 ft. by 10 ft. platforms are used, each supported on electronic load cells.

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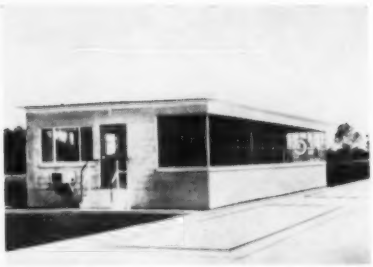
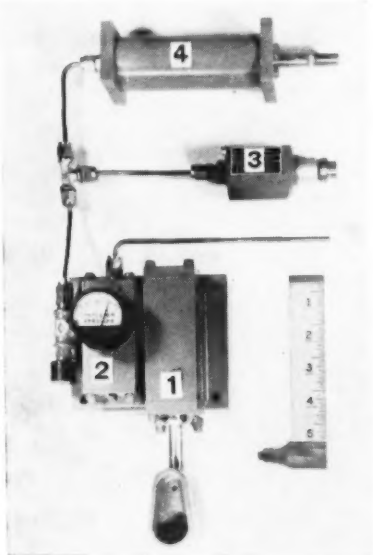


These cells are connected to a single remotely located Toledo electronic scale head. A four-position platform selector switch is mounted on the scale head. This switch connects the cells under each platform in succession to the indicating head. Thus, the load of each axle is indicated and printed. The fourth position on the switch provides an indication of the total weight on the three platforms. A Toledo Printweigh is provided, which may be equipped with its accessories.

Circle No. 4599
on Reply Form for Details

Safety Control

California Controls Co. is offering its non-electric "Calcon" safety control system, a unit which operates through a small captive charge of compressed air, to meet a wide range of temperatures, pressures, or a combination of both. The units are compact and can be assembled to meet the needs of numerous diversified operations. Said to produce immediate, positive action response, Calcon puts into operation almost any type of pilot operated valve, switch, warning or other control. The company claims that Calcon is the only self-powered safety control able to sense pressures up to 2,000 psi. It has its own source of pneumatic power and is not dependent on outside power which could fail and shut down equipment unnecessarily. Units are of all aluminum and brass construction to eliminate fire hazards. The system is reset easily after operation or shutdown, and the set points



for temperature and pressure are adjustable. Remote reset is available if desired.

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Vacuum Cleaning

The need for a multi-purpose, air-operated, high-suction vacuum cleaner that can be run with compressed air or steam is being met with the "Air-Vac" manufactured by Kimco Products Co. The unit may be used for all types of industrial cleaning, including railroad cars, tanks and floors. "Air-Vac's" high vacuum and suction are attained through a Venturi air-jet system which eliminates electric motors, moving parts, maintenance and fluctuations in vacuum. The new unit is supposed to have the ability to pick up liquids at rates up to two gallons a second and fluid lift to 25 ft. It will pick up dry materials at rates up to 125 lb. min. All material picked up, wet or dry, is deposited into a 55 gal. drum or similar container. Hose sizes available range in four diameters from 1½ in. to 4 in.

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Flow Diagram Sheet

Sprout, Waldron & Co. has prepared a special photo sheet showing the flow diagram and a series of installation photographs of the bulk flour pneumatic unloading, storage transfer and inplant air handling systems installed in the National Biscuit bakery at Houston, Texas. Copies are available on request. In addition to the flow diagram, there are photos inside and outside the plant clearly illustrating the installations, with accompanying textual explanations.

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Have You Considered Oil-Immersed Controls for Problem Areas?

By T. F. Bellinger
and
R. F. Schoof

Recent developments in high voltage oil-immersed motor controls now provide flour mills and grain elevators with a choice between units designed for direct exposure in so-called problem areas and general purpose equipment mounted remotely in a manufactured environment.

Problem areas are divided by the National Electric Code into three general classes: Class I, explosive gases; Class II, ignitable dusts, and Class III, air borne flammable materials, fibers, etc. In these classes are Groups A through G which specifically define the exposure. A further breakdown by divisions in Class I and II denotes hazardous or continuous exposure by Division I and semi-hazardous or intermittent exposure by Division II.

The increased use of 2,000 to 5,000-volt motors in problem areas rather than 600-volt machines or less has heightened interest in oil-immersed controllers.

In hazardous areas, where small low voltage equipment is used, the problem is solved at reasonable cost with cast iron or cast aluminum enclosures. However, in the larger sizes of low voltage equipment ranging into hundreds of horsepower and in high voltage controllers, size and weight limitations preclude the use of explosion-resistant enclosures. For the high voltage class, the solution is to place all main arcing contacts at least six inches under oil.

Some Advantages

Now that a completely self-contained, heavy-duty oil-immersed controller is available for high voltage control, flour mills and grain elevators may find it advantageous to apply it instead of locating general purpose equipment outside an area of explosive dusts or in a purged room.

While the location of general purpose equipment outside a problem area is often a satisfactory solution, frequently the branch circuit becomes too long, the cost of installation high, and the line losses great.

As for the purged room, certain complexities prevail. These include the cost of the switch room, the continuous maintenance of pressure, the need for a source of un-

Oil-immersed controls — have you examined their possible use in your operation? They should be examined, studied and applied where found suitable by millers and grain elevator operators. The authors are with Allis-Chalmers Manufacturing Co., Milwaukee. Mr. Bellinger is in the control department and Mr. Schoof in the safety services department.

contaminated air, and the safeguarding against open doors.

Special purpose controllers made possible by a new oil-immersed contactor are extremely versatile and adaptable to most of the problem areas. They can be had as cubicle mounted units; as completely self-contained floor-mounted lift-out controllers with all high and low components under oil, and as frame-mounted, tank-lowering units with all relays housed in explosion-proof boxes. The latter type provides maximum versatility for synchronous motors or other special applications.

Particularly recommended for non-repetitive duty, the oil-immersed controller has certain operational and maintenance advantages beyond being non-arcing, unaffected by corrosive gases and acids, and impervious to build-ups of dust and other contaminants.

High voltage oil-immersed motor controllers now have the same horsepower, voltage and interrupting ratings as air-break contactors which are recognized for their long switch life in highly repetitive service in non-hazardous locations.

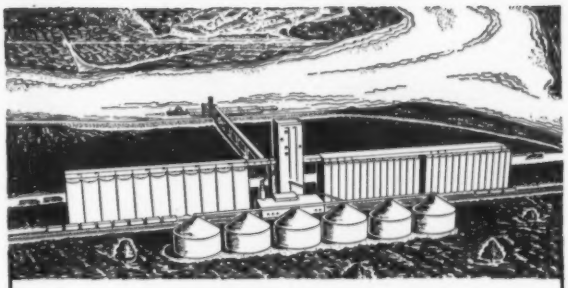
Interchangeable with controller structures and assemblies used on high voltage air-break contactors, the oil-immersed units have comparable ratings of 1,500 h.p. at 2,300 volts and 2,500 h.p. at 4,160 volts, and an interrupting capacity of 50 mva. at either voltage. This interchangeability, made possible primarily through a unique arc quenching principle which provides fast and efficient arc interruption, and newly developed high strength, arc-resistant insulating glass-polyester materials, assures maximum economy and standardization for flour mill and grain elevator control equipment.

Equivalent Ratings

Based on operating experience, these heavy-duty oil contactors are equivalent to ratings of high voltage air-break contactors and superior to high voltage oil switches devised for circuit breaker mechanisms. Circuit breaker mechanisms used in controllers for hazardous areas are generally bulky, have a low life expectancy, require considerable maintenance, and are not designed for jogging or repetitive duty applications. The use of 2-wire automatic starting and stopping of such controller mechanisms can cause difficulty.

Recent developments in protective finishes make control equipment more suitable for direct exposure to highly corrosive atmospheres. Special preparations and applications of vinyl plastic finishes in pleasing hues and surfaces provide maximum protection against sulphur dioxide, hydrogen sulfide and chlorine atmospheres as well as salt spray.

Two general types of completely self-contained con-



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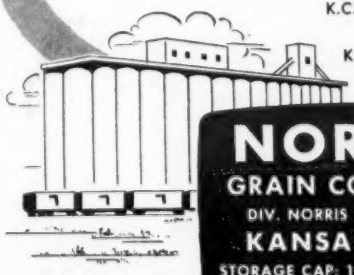

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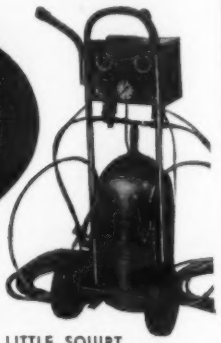

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IN THE HEART OF KANSAS

GRAIN STORAGE 3,000,000 BU

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trollers are provided for maximum horsepower and voltage applications and different types of motors and starting procedures. Various standard and special operational and protective features can be had on each, consistent with the application.

The first type, classed as high-voltage, oil-immersed equipment, is of typical design normally used with conventional high voltage controllers with air-break contactors. Its control equipment is housed individually or in assembled groups in standard modular 90-in. high enclosures with a common 3-phase power bus.

Each self-contained motor controller unit consists of a 3-phase, gang-operated, non-load break type isolating switch, high voltage current limiting power fuses, step-down control transformer, current transformers, and heavy-duty, oil-immersed line contactor with control devices and components. The units have an interrupting capacity of 150 mva. at 2,400 volts and 250 mva. at 5,000 volts. The line oil contactor's 50-mva. interrupting capacity is generally not utilized because of the fast fault clearing of the fuses—less than ½ cycle at maximum capacity.

All high voltage load interruptions occur under oil in the respective device containers; all arcing contact low voltage control components are in explosion-proof, corrosion resistant compartment boxes. The primary of the step-down control transformer is disconnected by a manually-operated, oil-filled switch. The gang-operated line isolating switch is mechanically interlocked with both the transformer disconnect switch and the oil-immersed line switch to prevent accidental opening or closing of the isolating switch while carrying any degree of power.

This type of oil-immersed control equipment in cubicle arrangement is well suited for semi-hazardous applications or where mildly corrosive atmospheres or extreme amounts of dust and similar materials are present. It is designed for full or reduced voltage types of starting of squirrel-cage, synchronous and wound rotor motors, and is available for indoor or outdoor installation in the conventional arrangement with low voltage control components mounted on open air panels.

The self-contained, tank-type control equipment for use in highly corrosive atmospheres consists of a heavy-duty oil-immersed contactor similar to that found in the cubicle controllers with all high and low arcing components in a common tank below a 6-in. minimum oil level. Units can be arranged side by side and connected with a 3-phase common power bus. Optional equipment includes an externally-mounted, gang-operated load break, oil-filled isolating switch.

Equipment of this type provides interrupting capacities of 50 mva. through switchboard type oil-immersed overcurrent relays which operate to open the line switch. Two

"Golden Loaf" FLOUR

Milled from choice spring wheat under modern laboratory supervision for particular bakers—aged—aerated—bulk or sack loading.

Quality Flour for 59 Years

TENNANT & HOYT COMPANY
LAKE CITY, MINNESOTA

relays suitable for delta grounded Wye systems are normally used.

Three-phase fault relaying should be used for grounded Wye systems. Total fault clearing time is less than 8 cycles, which is comparable to quick acting circuit breakers. Primaries of step-down control transformers are protected with oil-immersed current-limiting fuses.

Tank Types

Tank-type oil-immersed controllers suitable for outdoor installations are floor or elevated frame mounted. Their low voltage control components are oil immersed in the same tank as the high voltage equipment and separated by a panel or in externally mounted corrosion resistant aluminum explosion-proof cases.

Ratchet type hoisting and lowering mechanisms permit quick access to the oil-immersed devices. The assemblies containing all the high and low voltage components under oil are particularly suited for extremely corrosive areas.

The new versatile high voltage oil-immersed motor control equipment provides maximum load and interrupting capacity ratings. Don't overlook it when considering suitable motor controllers for areas harboring explosive dusts. «

Ward Personnel Attend Production Seminar

There'll be some new ideas and improved operating procedures in a number of Ward Baking Co. plants, thanks to a "brush up" course in sanitation procedures and production techniques attended by selected personnel.

In cooperation with the American Institute of Baking, Ward sent some of its key people to a two-day special seminar at Tampa, Fla. Personnel were in attendance from 10 Ward plants serving the entire southern region.

Sanitation supervisors, production superintendents, sales and personnel managers attended from Ward plants in Rocky Mount, Raleigh, and High Point, N.C.; Birmingham, Ala.; Tampa, Ft. Pierce, Daytona Beach, St. Petersburg, and Jacksonville, Fla., and New Orleans.

Cooperation Emphasized

Participation of production superintendents from seven of the 10 plants emphasized the importance of production department cooperation in plant sanitation programs.

Philip T. McDonald, assistant director of sanitation at AIB, and George Tompkins, chief sanitarian for Ward, conducted the sessions. They were assisted by C. R. Madsen, assistant district agent for the Fish and Wildlife Service of the Department of the Interior.

The course covered control of rodents, insects and foreign material; cleaning practices, structural and equipment harborages; storage practices; molds and bacteria; and local, state, and federal laws concerning bakery operations.

Similar to the six-day special course in sanitation given at the institute, the course in Tampa was the fourth held by the institute for individual companies or trade associations. AIB has conducted two four-day courses for the Interstate Bakeries Corp. and one for the Texas Bakers Assn.

The Tampa course was the first concentrated two-day program given by institute personnel. «

This self-rising flour is a cinch to handle.

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SYNTHETIC PLASTIC COATINGS

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Modern science has developed effective new materials for better, lower cost sanitation in milling production and storage areas. The new synthetic resins and plastics form slick, tough coatings that fill dirt-catching, insect-harboring crevices in floors, walls, ceilings. The smooth, unbroken plastic surface is easier to clean, and stays clean longer. These versatile products—of which there are many types for a variety of uses—can be applied over any type of construction: wood, metal, concrete, masonry. They are available in a number of colors, textures and price ranges.

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FLOUR PRODUCTION

A Statistical Service Provided Continuously for Readers of The Northwestern Miller for More than Half a Century.

WEEKLY FLOUR PRODUCTION, IN SACKS (CWT.)

Flour production in principal manufacturing areas by mills reporting currently to The Northwestern Miller with relationship of production to capacity and to the total estimated output of all mills in the U.S. expressed in percentages:

	Aug. 28-Sept. 4, 1960	*Previous week	Aug. 30-Sept. 6, 1959	Aug. 31-Sept. 7, 1958	Sept. 1-8, 1957
Northwest	741,747	801,852	648,133	735,702	759,867
Southwest	1,433,440	1,392,571	1,266,710	1,542,926	1,425,765
Buffalo	547,376	470,567	522,853	521,758	651,015
Central and Southeast	595,855	638,555	603,759	596,938	581,372
Pacific Coast	446,591	469,600	422,679	470,669	358,994
Totals	3,765,009	3,773,145	3,424,134	3,867,993	3,777,013
Percentage of total U.S. output	74.9	74.9	75	75	75
Estimated total U.S. production	5,026,714	5,037,577			
Accumulated total this month	2,010,686				

*Revised.

	—Percentage of capacity operated in 5-day week—					Crop year flour production —July 1 to—	
	Aug. 28-Sept. 4, 1960	Previous week	Aug. 30-Sept. 6, 1959	Aug. 31-Sept. 7, 1958	Sept. 1-8, 1957	Sept. 4, 1960	Sept. 6, 1959
Northwest	104	113	89	110	114	6,504,641	6,712,228
Southwest	109	106	98	117	108	12,445,181	13,426,515
Buffalo	105	90	106	110	137	4,524,387	4,881,415
Central and S.E.	89	95	94	105	102	5,584,849	5,863,745
Pacific Coast	96	101	91	149	102	3,862,743	4,299,464
Totals	102	102	96	116	111	32,921,801	35,183,367

NORTHWEST

Minneapolis

	5-day week capacity	Flour output	% capacity
Aug. 28-Sept. 4	240,000	190,686	79
Previous week	240,000	*221,490	92
Year ago	231,000	175,820	76
Two years ago	237,000	228,902	97
Five-year average			45
Ten-year average			75

*Revised.

Principal interior mills in Minnesota, including Duluth, St. Paul, North Dakota, Montana and Iowa:

	5-day week capacity	Flour output	% capacity
Aug. 28-Sept. 4	472,750	551,061	117
Previous week	472,750	*580,362	123
Year ago	494,500	472,313	96
Two years ago	430,500	506,800	118
Five-year average			159
Ten-year average			139

*Revised.

CENTRAL AND SOUTHEASTERN

Mills in Illinois, Ohio, Michigan, Wisconsin, Indiana, Kentucky, North Carolina, Tennessee, Virginia, Georgia and eastern Missouri:

	5-day week capacity	Flour output	% capacity
Aug. 28-Sept. 4	672,260	595,855	89
Previous week	672,260	*638,555	95
Year ago	643,750	603,759	94
Two years ago	570,260	596,938	105
Five-year average			102
Ten-year average			104

*Revised.

SOUTHWEST

Kansas City

	5-day week capacity	Flour output	% capacity
Aug. 28-Sept. 4	224,250	264,103	118
Previous week	224,250	275,052	123
Year ago	221,750	199,899	90
Two years ago	287,500	284,708	99
Five-year average			169
Ten-year average			145

Representative Mills, Outside of Kansas City (Including Wichita and Salina)

	5-day week capacity	Flour output	% capacity
Aug. 28-Sept. 4	1,090,750	1,169,337	107
Previous week	1,090,750	*1,117,519	102
Year ago	1,058,800	1,066,811	100
Two years ago	1,032,000	1,258,218	122
Five-year average			147
Ten-year average			123

*Revised.

BUFFALO

	5-day week capacity	Flour output	% capacity
Aug. 28-Sept. 4	522,000	547,376	105
Previous week	522,000	470,567	90
Year ago	493,500	522,853	106
Two years ago	475,000	521,758	110
Five-year average			45
Ten-year average			85

PACIFIC COAST

Principal Mills on the Pacific Coast

California, Oregon and Washington Mills

	5-day week capacity	Flour output	% capacity
Aug. 28-Sept. 4	466,500	446,591	96
Previous week	466,500	*469,600	101
Year ago	466,500	422,679	91
Two years ago	315,000	470,669	149

DURUM PRODUCTS OUTPUT

Durum products output of mills reporting to The Northwestern Miller, in sacks, based on five-day week:

	5-day wk. capacity	Wkly. production	% of capacity
Aug. 28-Sept. 4	177,500	182,654	103
Previous week	177,500	*210,700	119
Year ago	156,500	164,541	105

	Crop year production
July 1-Sept. 4, 1960	*1,591,139
July 1-Sept. 6, 1959	1,634,833

*Revised.

THE NEW MILLER'S GREAT!

Production for Aug. 28-Sept. 4 is at the left; Sept. 4-11 appears here

WEEKLY FLOUR PRODUCTION, IN SACKS (CWT.)

Flour production in principal manufacturing areas by mills reporting currently to The Northwestern Miller with relationship of production to capacity and to the total estimated output of all mills in the U.S. expressed in percentages:

	Sept. 4-11, 1960	*Previous week	Sept. 6-13, 1959	Sept. 7-14, 1958	Sept. 8-15, 1957
Northwest	706,770	741,747	809,529	752,458	797,912
Southwest	1,239,320	1,433,440	1,483,493	1,581,257	1,469,454
Buffalo	367,229	547,376	559,004	585,625	636,340
Central and Southeast	556,835	595,855	690,953	593,370	594,115
Pacific Coast	449,901	446,591	500,490	490,617	350,358
Totals	3,320,055	3,765,009	4,043,469	4,003,327	3,848,179
Percentage of total U.S. output	74.9	74.9	75	75	75
Estimated total U.S. production	4,432,650	5,026,714			
Accumulated total this month	6,443,336	2,010,686			

*Revised.

	—Percentage of capacity operated in 5-day week—					Crop year flour production ——July 1 to——	
	Sept. 4-11, 1960	Previous week	Sept. 6-13, 1959	Sept. 7-14, 1958	Sept. 8-15, 1957	Sept. 11, 1960	Sept. 13, 1959
Northwest	99	104	112	113	115	7,211,411	7,521,757
Southwest	94	109	115	120	111	13,684,501	14,910,008
Buffalo	70	105	113	123	131	4,891,616	5,440,419
Central and S.E.	83	89	107	104	100	6,141,684	6,554,698
Pacific Coast	96	96	107	156	108	4,312,644	4,799,954
Totals	90	102	112	120	113	36,241,856	39,226,836

NORTHWEST

Minneapolis

	5-day week capacity	Flour output	% capacity
Sept. 4-11	240,000	†210,264	88
Previous week	240,000	190,686	79
Year ago	231,000	236,782	103
Two years ago	237,000	234,750	99
Five-year average			43
Ten-year average			74

†Four-day week.

Principal interior mills in Minnesota, including Duluth, St. Paul, North Dakota, Montana and Iowa:

	5-day week capacity	Flour output	% capacity
Sept. 4-11	472,750	†496,506	105
Previous week	472,750	551,061	117
Year ago	494,500	572,747	116
Two years ago	430,500	517,708	120
Five-year average			159
Ten-year average			139

†Four-day week.

CENTRAL AND SOUTHEASTERN

Mills in Illinois, Ohio, Michigan, Wisconsin, Indiana, Kentucky, North Carolina, Tennessee, Virginia, Georgia and eastern Missouri:

	5-day week capacity	Flour output	% capacity
Sept. 4-11	672,260	†556,835	83
Previous week	672,260	595,855	89
Year ago	643,750	690,953	107
Two years ago	570,260	593,370	104
Five-year average			100
Ten-year average			104

†Four-day week.

SOUTHWEST

Kansas City

	5-day week capacity	Flour output	% capacity
Sept. 4-11	224,250	†216,413	97
Previous week	224,250	264,103	118
Year ago	221,750	249,290	112
Two years ago	287,500	284,454	99
Five-year average			167
Ten-year average			144

†Four-day week.

Representative Mills, Outside of Kansas City (Including Wichita and Salina)

	5-day week capacity	Flour output	% capacity
Sept. 4-11	1,090,750	†1,022,907	94
Previous week	1,090,750	1,169,337	107
Year ago	1,068,800	1,234,203	115
Two years ago	1,032,000	1,296,803	126
Five-year average			145
Ten-year average			122

†Four-day week.

BUFFALO

	5-day week capacity	Flour output	% capacity
Sept. 4-11	522,000	†367,229	70
Previous week	522,000	547,376	105
Year ago	493,500	559,004	113
Two years ago	475,000	585,625	123
Five-year average			36
Ten-year average			81

†Four-day week.

Millfeed Production

Mills in the Northwest, Southwest and at Buffalo, representing 75% of the combined flour milling capacities of those areas, reported production of 43,652 tons of millfeed for Sept. 4-11, compared with an output of 53,818 in the corresponding week a year ago. Production for the previous week of Aug. 28-Sept. 4 was 51,374, compared to 45,999 in the corresponding week of last year.

PACIFIC COAST

Principal Mills on the Pacific Coast
California, Oregon and Washington Mills

	5-day week capacity	Flour output	% capacity
Sept. 4-11	466,500	†449,901	96
Previous week	466,500	446,591	96
Year ago	466,500	500,490	107
Two years ago	315,000	490,617	156

†Four-day week.

DURUM PRODUCTS OUTPUT

Durum products output of mills reporting to The Northwestern Miller, in sacks, based on five-day week:

	5-day wk. capacity	Wkly. production	% of capacity
Sept. 4-11	177,500	†174,045	98
Previous week	177,500	182,654	103
Year ago	156,500	184,213	118

	Crop year production
July 1-Sept. 11, 1960	1,736,213
July 1-Sept. 13, 1959	1,619,046

†Four-day week.

The MILLER
points up
the FACTS
that MATTER

New Model Boxcar Dumper Tilts Twice And Presto—Whole Load Discharged!

Put together the demand for quicker boxcar unloading, add the talents of a team of former aircraft designers, plus a fellow who builds model railroads and what do you have?

The result is a model boxcar dumper that could be the answer to some classic problems, particularly at the Canadian Lakehead, where cars lay idle for long periods and unloading is a multiple chore requiring the services of teams of workmen.

Four minutes—that's the time required to empty a load of grain with an automatic dumper that see-saws a boxcar up on one end, empties half of it, then see-saws down the other way and empties the other half.

Firm Formed

So say officials of the company which has designed and operated a working model of the dumper, Seabar Equipment, Ltd., Fort William, Ont. Actually, the project—and the Seabar firm—resulted from years of study by the Searle Grain Co. and a firm of pioneer grain elevator builders, Barnett-McQueen.

Development of the fully automatic dumper also brought into play the brain work of three aircraft designers who had scattered to distant locations for some years and a meter reader who "just enjoys" operating a model railway for children.

Raymond Nash, manager of Seabar, demonstrated a scale model of the dumper recently at Winnipeg, and there are plans to show it at Ottawa. Viewers at Winnipeg were able to see the dumper tilt a model car one way and then the other, emptying it completely without shoveling.

Levers open the doors on both sides, then on the first tilt, one end of the car is emptied, with the grain discharging out both open doorways at once. At the push of a button a baffle swings in from either side, sweeping grain from the doorways.

LOADED GRAIN CAR locked on dumper can be seen in this scale model boxcar with plastic sides to show contents. In back is Stan Maynard, formerly an aircraft designer, who developed the boxcar dumper.

These baffles, which Mr. Nash calls "the heart of the system," then meet inside the boxcar, forming a plow-shaped barricade which holds the remaining grain. The second tilt, which up-ends the other end, empties this half of the grain, which is funnelled out by the baffles, so none can get back into the lowered end. The dumper is levelled and the boxcar rolls off —"Next car, please."

Total elapsed time for the process is 4 min. Total labor force is one man who pushes the buttons on the remote control box.

Manual Follow-Up

Mr. Nash estimated that 80% of the grain dumping at the Canadian Lakehead requires a manual follow-up after the car is side-tilted. Four men with power shovels go in and sweep out the trapped grain. He added that, aside from the saving in labor, it has actually been a problem getting men to do the required shovelling. The job, he said, is unpleasant and unhealthy, requiring a mask on the face to keep grain dust out of the lungs.

Instead of four-an-hour cleared at most Lakehead pits, the new dumper would safely dump up to 10 cars, or 20,000 bu. grain.

Complete cost of the equipment is expected to be from $170,000 to $190,000, including installation,

PROFESSIONAL VALUATIONS

of

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Feed Mills
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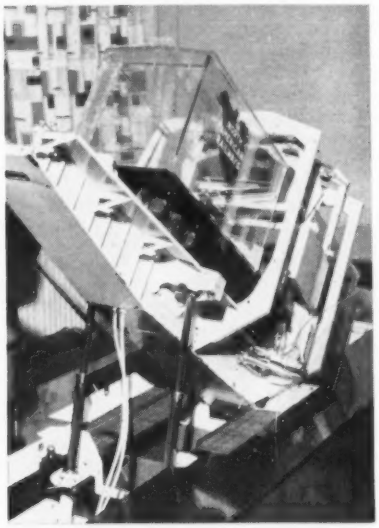
WA 6-6531 **Minneapolis 16, Minnesota**

which should take from three to four weeks. It was designed for easy conversion at existing sheds or for new elevators.

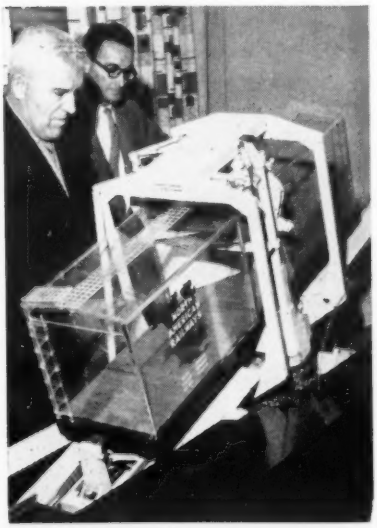
Ex-Avro aircraft men, Robert Day, Stan Maynard and Gordon Hewson, designed the dumper and Norman Mottshaw built the working model. Mr. Mottshaw is a Port Arthur, Ont., meter-reader who builds and runs a miniature railroad in his back yard, giving rides to neighborhood kids.

When the Avro Arrow jet interceptor was cancelled, some of the aviation world's top designers scattered. Mr. Maynard, who had emigrated from England, returned to the mother country. Mr. Day went to work for Lockheed Aircraft in California. They were brought together again to create the Seabar Dumper, which model has cost $10,000 so far and took nine months to build. Mr. Nash said it is the next thing to aviation's wind tunnel for testing design.

The scale model dumper came to Winnipeg from a showing at New Orleans where it was well received. Officials said that, as pleased as they themselves were with it, they were pleasantly surprised by enthusiasm shown. «



FIRST TILT, and one end of the car is emptied, with grain discharging from open doors on both sides at once. The car doors are opened automatically by levers.



SECOND TILT funnels out the remaining grain by use of baffles which enter the car automatically from either side. Baffles meet in the center, forming a barricade to prevent grain from flowing back into the emptied end. The completely empty end may be seen through the clear plastic sides of the scale model. At the lower right grain can be seen flowing. At the left is Norman Mottshaw, builder and co-designer, with Mr. Maynard at the right.

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LEADING FLOUR IMPORTERS ABROAD

Many of the firms appearing in this list are available to handle the importation of other products besides flour. Some specialize additionally in cereals, some in bakers' sundries and others in feed grains and ingredients. Most of them have connections in adjacent countries and are equipped to handle both import and export business on an extensive basis. For a list of recommended firms dealing in specific commodities or in specific countries write to THE Northwestern MILLER, P.O. Box No. 67, Minneapolis 40, Minn., U.S.A.

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H. Cohen & Co., Ltd.
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LONDON, E.C. 4
Cable Address: Bortrite, London

Mardorf, Peach & Co., Ltd.
52, Mark Lane LONDON, E.C. 3
Cable Address: "Dorfeach," London

Vaughan Thomas & Co., Ltd.
The Corn Exchange Building
52/57 Mark Lane LONDON, E.C. 3
Cable Address: "Avaumas," London

GERMANY

Einfuhrhandel Mannheim
Hans Werle
MANNHEIM/GERMANY, E2., 1-3
Cable Address: "Einfuhr" Telex 0463270

DENMARK

Brodr. Justesen
COPENHAGEN
Cable Address: "Justesens," Copenhagen

SCOTLAND

Farquhar Brothers
50 Wellington Street GLASGOW,C.2
Cable Address: "Glencairn," Glasgow

McConnell & Reid, Ltd.
19 Waterloo St. GLASGOW
Cable Address: "Marvel," Glasgow

D. T. Russell & Baird, Ltd.
106 Hope Street GLASGOW,C.2

HOLLAND

Bulsing & Heslenfeld N. V.
Established 1885
Damrak 20-22
AMSTERDAM (C)
Cable Address: "Heslenfeld," Amsterdam

STOLP & CO., LTD.
47-48 Damrak AMSTERDAM
Cable Address: "Cleo"

Gebrs. Van Den Bergh's N. V.
ROTTERDAM
Cables: Locomotion Rotterdam

N. V.
Algemeene Handel-en Industrie Maatschappy
"MEELUNIE"
Heerengracht 209 AMSTERDAM

N. V. Agentuur & Commissiehandel
v/h P. C. Vis & Co.
AMSTERDAM
Cable Address: "Visco"

Luchsinger, Meurs & Co.'s
Handelsmaatschappij, N.V.
AMSTERDAM—C.
Cable Address: "Matluch"

M. WITSENBURG JR. N. V.
Postbox 945 AMSTERDAM C.
Cable Address: "Witburg"

GRIPPELING & VERKLEY N. V.
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Millers in 44 Overseas Nations Read Every Issue of the Miller

Improved Earnings Sighted for Pillsbury, President Gerot Reports

A brighter earnings outlook for stockholders of the Pillsbury Co. in the year 1960-61 was forecast by Paul S. Gerot, president, at the annual meeting in Minneapolis.

He bases his opinion on the fact that earnings for the first quarter of fiscal 1961 were better than for the corresponding period a year ago.

But Mr. Gerot warned the stockholders that there is no indication of any easing in the intensive competitive situation which the company has to face, particularly in the consumer area of the business. However, he is looking for some improvement in earnings as the year progresses based on programs and operating plans now at work within the company.

Sales last year, it was pointed out, were the second highest in the company's history—a total for all products and services of $373,818,795. (But earnings, in line with the trend reported by other milling companies, dipped from $7.9 million in fiscal 1959 to $6.5 million in '60.)

There is to be no reduction in Pillsbury's capital expenditures in the current year, compared with last year, according to Mr. Gerot. In fiscal 1960 the company invested $9.4 million.

• • •

Venezuelan Business Aided By Mill Interest Purchase

Mr. Gerot announced to the stockholders that the company has purchased a majority interest in the Mocama flour mill, located at Catia La Mar, near Caracas, Venezuela. Completely modern in equipment and design, the mill has a daily capacity of 2,500 cwt. The purchase price was not disclosed.

Earlier, it had been announced that Pillsbury proposed to build a new mill at Maracaibo, Venezuela. Explaining the reasons for the abandonment of this plan, Mr. Gerot stated: "Subsequently, the opportunity arose to purchase an interest in the already established Mocama mill which we feel offers a greater advantage to Pillsbury."

Stockholders at the annual meeting were told that Pillsbury is actively seeking more foreign, as well as domestic, growth opportunities. Overseas growth will come through increased exports to some markets, and through actual entry into flour milling in others, Mr. Gerot said.

In line with the policy of building overseas interests, the company has already entered into licensing and technical assistance agreements in Guatemala and El Salvador, and has entered a joint ownership agreement to build and operate a mill in Ghana.

• • •

Quarterly Dividend Declared

The board of directors of the Pillsbury Co. has announced a quarterly dividend of 35¢ a share on the common stock . . . the company's 134th consecutive dividend. It will be payable Dec. 1, 1960, to stockholders of record Nov. 3. Pillsbury has 2,109,700 common shares outstanding. «

ALL DIRECTORS REELECTED

All directors of the Pillsbury Co. were reelected by the stockholders at the annual meeting. The following are the directors active in the day-to-day operation of the company: Philip W. Pillsbury, chairman of the board; Paul S. Gerot, president; B. J. Greer, Robert J. Keith and Dean McNeal—all executive vice presidents; James L. Rankin, Paige Lehman and John P. Snyder, Jr., vice presidents. Other directors are: Edward B. Cosgrove, chairman of the board, Green Giant Co., LeSueur, Minn.; Robert V. Horton, a partner in Goldman, Sachs & Co., New York; Rogers C. B. Morton, who farms at Easton, Md.; John S. Pillsbury, Jr., president, Northwestern National Life Insurance Co., Minneapolis; Harry C. Piper, a partner in Piper, Jaffray & Hopwood, Minneapolis; Dr. Samuel N. Stevens, president, Stevens, Thurow & Associates, Chicago, and J. Cameron Thomson, retired chairman of the board, Northwest Bancorporation, Minneapolis.

There is a lot to be said for
GOOD JUDGMENT

Good judgment has guided Ogilvie Flour Mills for more than a century and a half of leadership in the milling of fine flour. It's good judgment that causes Ogilvie to select only the choicest wheat . . . that combines their skill and knowledge with some of the most modern milling equipment in the world, to produce the unvarying high quality that their customers expect of the name "Ogilvie".

Ogilvie Flour Mills intend to continue using good judgment . . . the same good judgment that tells you it's wise to buy quality!

Manufacturers of Ogilvie Flour—Ogilvie Ready Mixes —Ogilvie Vita-B Wheat Germ Cereal—Ogilvie Oats —Ogilvie "Miracle" Feeds for livestock and poultry.

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Mills at: Montreal—Fort William—Winnipeg—Medicine Hat—Edmonton
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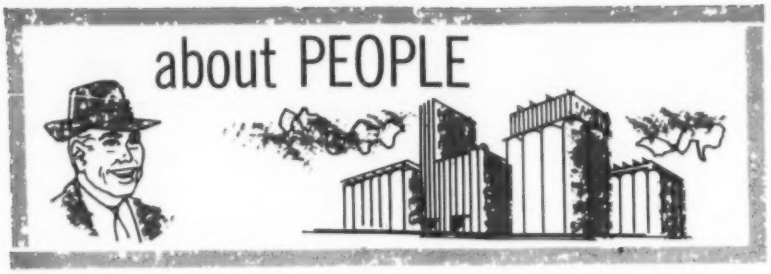

Bemis Bro. Bag Co. has a new field sales supervisor in Michigan and northwestern, Ohio. He is **Donald E. Prim**, who joined Bemis in 1948, served five years as a multiwall bag factory representative following his sales training, and later in 1956 was transferred to the Detroit sales office as a sales representative.

Donald E. Prim

He will continue to headquarter in Detroit, states **Fred M. Dreyer**, sales manager of the Indianapolis sales division. **U. E. Philpott**, field sales supervisor with offices in Indianapolis, will continue to hold down his sales territories in Indiana, Kentucky and central and southern Ohio.

●

Fisher Flouring Mills Co., in line with its policy of moving old hands to higher positions when possible, has promoted one of its versatile, key veterans. He is **Victor J. Evans**, formerly senior chemist and a member of Fisher's team since 1939. He now becomes chief chemist, replacing Arthur J. King, who died in July.

Mr. Evans is a graduate of the University of Washington, takes active part in professional organizations, and avocationally admits to considerable musical talent. He is a member of the American Chemical Society and the American Association of Cereal Chemists. Currently he is serving as secretary-treasurer of AACC's Pacific Northwest Section.

A violinist of some talent, he is a member of the Seattle Philharmonic Orchestra and several chamber music groups.

Announcement of the appointment was made by Fisher's president, **John L. Locke**, who commented with satisfaction on being able to fill a key role from within the firm's own organization.

●

A man with varied, professional experience has been named to manage the Thermoputer division of Leyghton-Paige Corp. which headquarters at Spring Park, Minn., just outside Minneapolis. He is **Weston Farmer**, formerly with the research and development department of Toro Manufacturing Co. and one time president and general manager of Buildo Co., both Minneapolis firms.

Mr. Farmer was the founding editor of Mechanics Illustrated magazine and did duty as a naval architect with the British Admiralty during World War II.

●

James C. Klima has been moved from the Quaker Oats Co.'s plant at Akron, Ohio, where he was superintendent, to take over as manager of the firm's plant at Chattanooga. It's a promotion, which has resulted in the movement of **Walter D. Schultz** from Los Angeles to fill the vacancy at Akron, also a promotion. Mr. Schultz was superintendent of the Quaker Oats mill at Los Angeles from February until his recent appointment.

The new manager at Chattanooga has been with the company since 1923. He came to Akron in 1947 to manage the cereal mill and took over as plant superintendent in 1953.

Mr. Schultz originally joined Quaker Oats in the production department at Memphis in 1951. A year later he went to Los Angeles as manager of the shipping department. He became assistant superintendent there in 1953.

●

A career spanning 36 years—and a wealth of developments in chemical processing—has come to an end with the retirement of **Lisle R. Brown**, chief chemist for A. E. Staley Manufacturing Co.'s quality control laboratory.

His duties will be ably performed now by **Eldred K. Olson**, who has been appointed as chief chemist for the Decatur, Ill.-based processing firm. Mr. Olson came to Staley in 1938, fresh from his graduation at the University of Iowa with BS and MS degrees in chemistry. He began as an analytical chemist, and has been the senior man in that capacity with the firm's control laboratory since 1955.

●

The whole state of Washington and some parts of Idaho and eastern Oregon now become the sales territory of **C. A. Anderson** with his appointment as sales manager of grocery products over that region for General Mills, Inc. He formerly headed the Spokane sales district for GMI, and has been with the company for 23 years.

●

A record of 60 years of service with McDonald & Robb, Ltd., Valleyfield, Que., has been stacked up by **Pierre Proulx**. At 80 years of age this grand old French-Canadian still operates a feed grinder and he's as good as any man, says **J. A. E. McDonald** proudly.

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The West Coast grain division of Archer-Daniels-Midland Co. has a new name on its roster — **H. Lee Clark**, but the man himself is no newcomer to the grain business. He actually began his career in the business in 1934, working under **H. W. Collins**, ADM vice president. He did service in the Army during World War II, then became Portland branch manager for Bunge Corp., where he remained 14 years. Now Mr. Clark will be assistant to **L. E. Davis** in ADM's export merchandising activities.

●

It's back to school for **Frank J. Allen, Jr.**, executive assistant to the president, and **C. Robert Stephenson**, general sales manager, both of Bay State Milling Co., Winona, Minn.

Currently they are attending a special, four-month course at Harvard University. Both are members of a small group of U.S. and foreign business executives picked to attend the program for management development offered by Harvard's graduate school of business administration.

The program includes concentrated study in general management, quantitative analysis, and human behavior in organizations, plus special seminars in industry trends and problems, and business leadership in perspective.

●

Peavey Names New Directors, Officers

Five new directors have joined the board of the F. H. Peavey & Co., Minneapolis, reports **Totton P. Heffelfinger**, president.

Elected at the annual stockholders meeting were: **William M. Steinke**, president of the milling division; **Mark W. K. Heffelfinger**, vice president of the division; **F. Peavey Heffelfinger, Jr.**, vice president and assistant in charge of terminal merchandising of the Peavey firm; **George W. P. Heffelfinger, Jr.**, vice president of the National Grain Co., Canada (a Peavey affiliate) and **Gerald A. D. Smith**, vice president and controller of Peavey.

All other directors were re-elected. **James B. Templeton** and **Albert C. Remele**, former directors, were named honorary directors. Mr. Templeton continues as a vice president and Mr. Remele as vice president and general counsel.

Other appointments made by the directors were: **Gilbert G. Giebink**, vice president and treasurer; **John A. Bowen**, vice president, insurance; **Gordon T. Leech** (Russell-Miller Milling Co.), secretary and assistant controller of Peavey; **J. Richard Adams** to be assistant secretary of Peavey Feed Mills Division in addition to duties as advertising manager; **Lester S. Swanson**, vice president, durum sales; **Bernard P. Mahowald** and **Alan D. Beggs**, to be assistant secretaries of Occident Elevator Division.

Assigned a new post with the milling division is **James W. Pehle**—he is to be vice president, production coordinator.

All other officers were re-elected including **F. Peavey Heffelfinger**, chairman of the board; **Totton P. Heffelfinger**, president, and **Charles E. Huntting**, executive vice president. «

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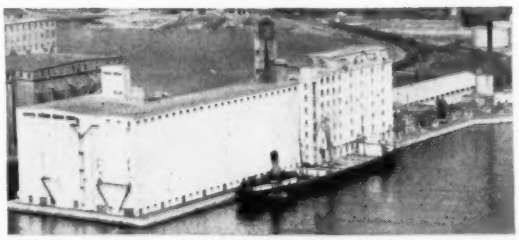

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The Pigurs & Drummers

If You've Never Heard of Their Unique Club, Then This Is Your Opportunity–Just Keep Reading

There's a group out Buffalo way giving new life to that old title, "The Jolly Miller." We're speaking of the

"Pigurs and Drummers Club." If the name sounds odd—just take the first letter of the mills in the area, put them together, and the name makes good sense: the Pillsbury Co., International Milling Co., General Mills, Inc., George Urban Milling Co., Russell Miller-King Midas Mills and Standard Milling Co.

Drummers, of course, comes from the 13 allied firms which chartered the P.&G. to sponsor an outing each year to determine the golf champ among the Buffalo mills and allied tradesmen.

The P.&G. recently held its second annual outing at the Shorewood Country Club—we'll let the story itself relate what occurred when the Jolly Miller(s) met face to face with club and wit:

This year's P.&G. outing was chairmanned by Harry Schutte, Schutte Pulverizer Co., assisted by Ed Cecka, MMC Sales Corp.; Ben Weides, Wallace & Tiernan, Inc., and Roy Kehr, Kressilk Products, Inc. There were 30 golfers and 50 present for the banquet and awarding of prizes.

★ ★

WE INTERRUPT THIS PORTION OF THE STORY TO MAKE A SPECIAL ANNOUNCEMENT: An A-1 priority bulletin has just been received that Morris Buckman, General Mills, fired an 81 to successfully defend his title as golf champ of the Buffalo flour mills. Trailing in second and third places were Dick Gosnell and Don Paugh, both of Pillsbury, with scores of 88 and 89, respectively. Leading the allied trades, at the same time posting low net, was Roy Kehr, with a 90-23 or 67.

★ ★

STUART BUTLER, Maple Leaf Milling Co., Ltd., Toronto, president of the Association of Operative Millers, arrived late for the tournament, but managed to play 9 holes, on which he recorded a 43. Other members of his late foursome were Bob Anderson of International and Jack Perkins and George Caylor of GMI, who recorded 9 hole scores of 61, 65 and 66, respectively. Someone observed, "If Stuart had arrived earlier and played with 'better' golfers, he certainly would have given 'Buck' Buckman a run for the title." As it was, the other three members of Stuart's foursome "collapsed" after all their efforts on the 9 holes—it's easy to see why Jack Perkins was awarded a prize for the most "tired" golfer. Last year, there was only one "birdie" recorded in the tournament, and the golfer who made it, of course, received a "prize." This year, five "birdies" were recorded. Since the committee came prepared to give only one prize for this achievement, they agreed to give it to whomever recorded the lowest score on any hole. This turned out to be Ed Cecka (a member of the committee) who recorded a "2" on the par 3 sixth hole. The good-natured "boos" recorded on this award could have been avoided, inasmuch as upon running

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MINNEAPOLIS, MINNESOTA

short of prizes for subsequent awards, Ed very generously donated his prize.

★ ★

AFTER SEVERAL heated discussions, it was generally agreed that the "most spectacular" shot of the tournament was recorded by Roy Kehr on the tough 535 yard par 5, 16th hole. Using a 7-iron, Roy holed-out his 125 yard approach shot for a "birdie" 4.

★ ★

LYLE MERTZ of GMI, who won a prize last year as the "most honest golfer" when he recorded a 135, won another prize this year for being "the most consistent high scorer." However, it must be said that Lyle showed definite improvement this year in recording a 119. One person was heard to remark: "At that rate of improvement, 'Buck' can expect another competitor within the next decade."

★ ★

A SPECIAL PRIZE was awarded to E. C. "Pete" Peterson, plant manager at Pillsbury. Pete, rumored to have been up all night on Friday as a result of labor negotiations, nevertheless was off the tee with the first foursome of the day. Tired and off his game, Pete completed the full 18 holes, recording a 99—a "real" competitor.

★ ★

"ALWAYS A BRIDESMAID, never a bride" was the statement which accompanied the award to Dick Gosnell, who for the second consecutive year, finished as runner-up to Buck for the golf title. Dick was overheard suggesting that next year's tournament be a handicap affair. A "good" loser, his efforts to "swipe" the trophy failed, because "Buck" had a quartet of GMI men keeping Dick under constant observation.

★ ★

ROY KEHR was almost subjected to a "special" handicap, when it was discovered that Martin Vanderheiden (superintendent of George Urban) had left to tee off with Roy's clubs. "Marty" was second among the "most optimistic" golfers, asking for only a 28 handicap, but then recording a 129.

★ ★

THE MOST OPTIMISTIC, high scorer of the tournament was Bob Williams of the R. E. Williams & Co. Bob, asking for only a 30 handicap, recorded a gigantic 138. Playing in a foursome with Lyle Mertz, one of the gathering was overheard to classify his playing as typical "customer golf." "Chairman" Harry Schutte, who last year recorded a 14 on one hole, surprised everyone (including himself) by being one of the five golfers to register a "birdie."

★ ★

ART HIBBS, International Milling Co., arriving very late also won a prize for being the most "persistent" golfer. Art insisted on playing 3 holes, and "dragged" Ed Cecka along with him—despite the fact that Ed had earlier completed the entire 18.

Among the non-playing golfers were two of the district's "retired" members Joe Rezabek, formerly of International, and Major Howe, past president of AOM. "Maj." walked away with one of the principal drawing prizes.

★ ★

HOSTS FOR THE 1960 outing were Buffalo Weaving & Belting Co.; Buhler Mill Engineering Co.; the Day Sales Co.; Globe Woven Belting Co.; S. Howes Co.; Kressilk Products, Inc.; MMC Sales Corp.; Richardson Scale Co.; Root, Neal & Co.; Schutte Pulverizer Co., Inc.; Sterwin Chemicals Inc.; Wallace & Tiernan, Inc., and R. E. Williams & Co. «

PIGURS AND DRUMMERS form a "gathering of the clan" to watch Harry Schutte, chairman of the outing, award the trophy to Morris "Buck" Buckman, winner of the day. Dick Gosnell, right foreground, is the day's runner-up. Roy Kehr, left foreground, just seems happy about the whole thing.

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◆ ◆ ◆

SITUATIONS WANTED

MILLING GRADUATE, AGE 45, EXPERIENCE-production, laboratory, sales, management-flour, meal, feed mixes. Desire management small or departmental head larger firm. Charles E. Baker, Jr., Port Republic, Virginia; Phone Goods Mill, Va. 29.

District 9, AOM, Completes Plans For Convention

Final arrangements have been made and the red carpet is about to be unrolled for the 24th annual convention of District 9, Association of Operative Millers. Dates are Sept. 30 and Oct. 1 and the place is the Benjamin Franklin Hotel in Seattle.

Glen Fisher, arrangements chairman, has an array of subjects and "lighter features" to keep the convention informative and lively.

Registration opens on Thursday evening, Sept. 29, and the meeting itself will be in session all day Friday, Sept. 30 and Saturday morning, Oct. 1.

Members can look forward to the AOM cocktail party, banquet and dance Friday evening and the allied trades' party Saturday evening. Not forgetting the women—there's a program for them Friday afternoon. A joint luncheon with the ladies is planned also for Saturday.

Along with Saturday plans, members may attend the University of Washington-Navy football game. Mr. Fisher has obtained a block of 130 tickets for the game, but just how far they'll go he's not able to guarantee. «

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GRIST of GRINS

An icy voice cut into an uninhibited telephone conversation, "Do you know whom you are addressing?"

"No," said the sergeant.

"Well, this is Major Anderson."

"Major," said the sergeant, "do you know whom you are addressing?"

"No!" thundered the major.

"Thank Gawd!" said the sergeant and hung up.

•

Two Ohio boys got lost driving through Tennessee. Along the deserted road trudged a native of whom they asked, "Which way to Chattanooga?"

The man stared at them, and then asked, "Where you boys from?"

"Ohio."

"I thought so," he said. "Wal, you found it in 1863. Let's see you find it again."

•

The reason that life on other planets is extinct is merely because their scientists are a little more advanced than ours.

•

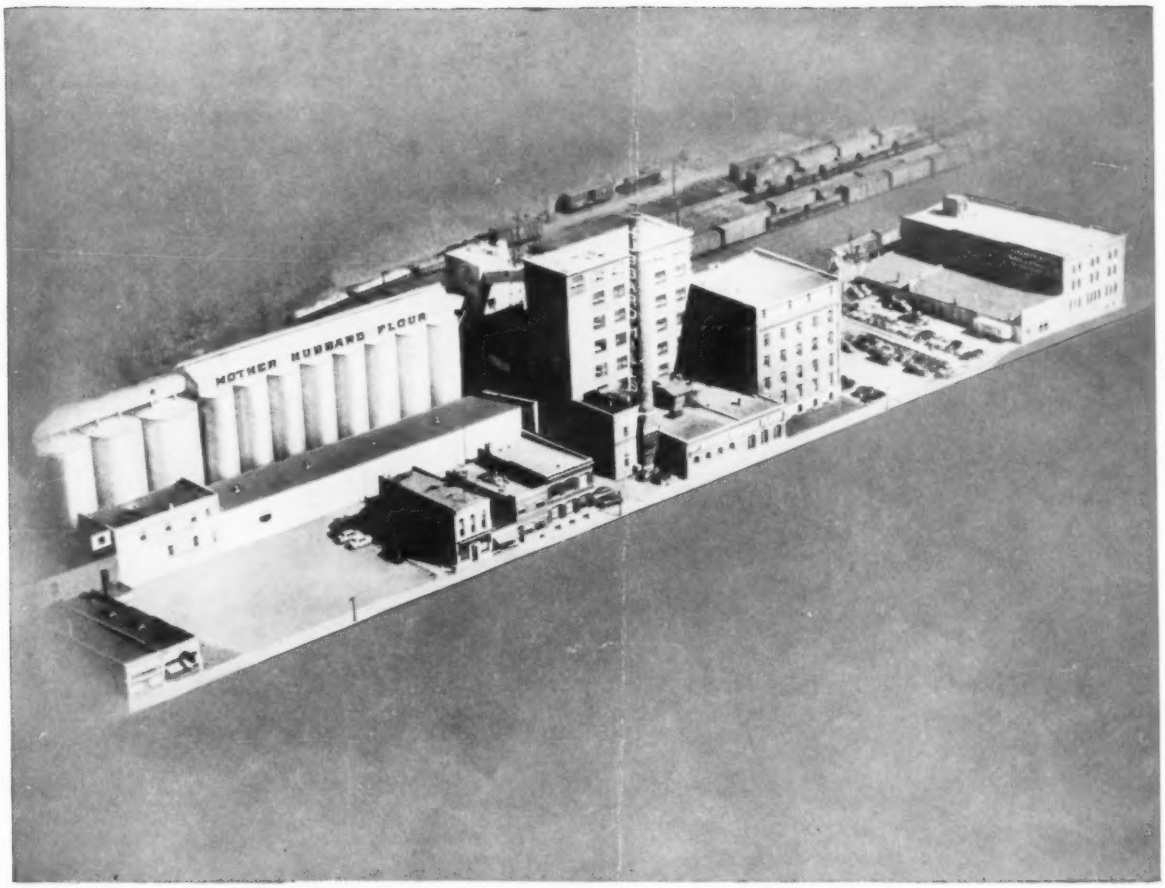
Drill Sergeant to Rookie: "Wipe that opinion off your face!"

Mrs. Flanagan: "Good morning, Mrs. Murphy. You're looking fine this morning."

Mrs. Murphy: "I'm sorry I can't say the same for you, Mrs. Flanagan."

Mrs. Flanagan: "You could if you were as big a liar as I am, Mrs. Murphy."

The
COLORADO MILLING & ELEVATOR CO.
General Offices: Denver, Colorado



Hubbard Milling Co., Mankato, Minnesota 3000 sacks capacity—mill elevator storage, 500,000 bu.

Mill employee setting single control of Dyox machine for maturing flour.

HUBBARD MILLING CO. KEEPS CUPBOARDS FILLED WITH THE HELP OF

W&T Flour Treatment

Hubbard Milling Co. uses dependable Wallace and Tiernan processes and equipments to send a steady flow of fine flour products to its customers. This mill knows the benefits of doing business with a firm of single-line responsibility — with manufacture, sales, and service under one roof.

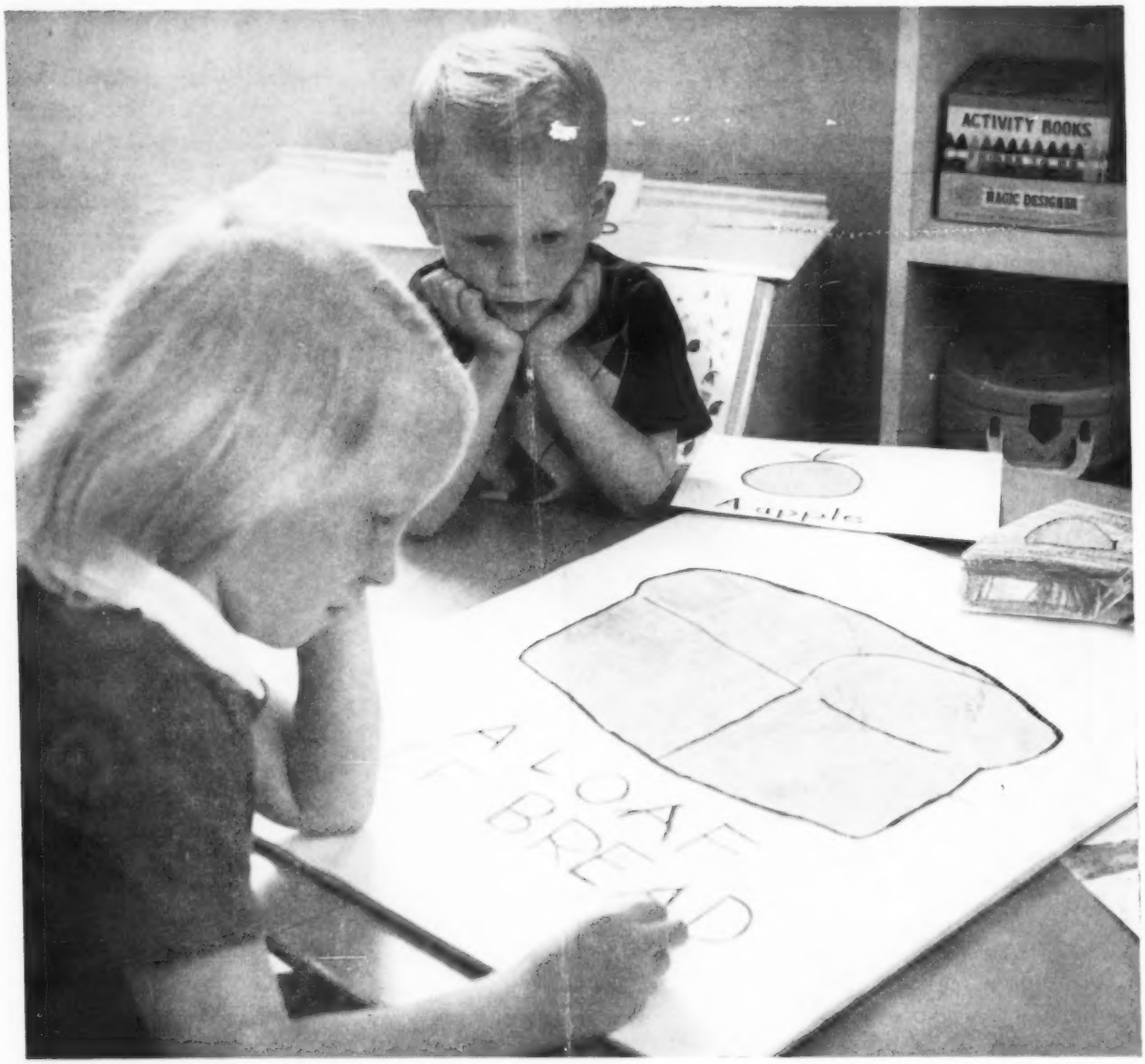
At Hubbard Milling the W&T Dyox® Process is used to generate and apply chlorine dioxide gas accurately and uniformly... matures the flour for best performance in bread baking.

Novadelox®, chosen for its bleaching efficiency, is fed through mill-proved NA Feeders for peak color removal and best color dress. Similar feeders apply "N-RICHMENT-A"® for the addition of vitamins and minerals.

Hubbard Milling Co. is only one of the many milling companies using W&T Flour treatment. If your mill is not one of these, investigate the advantages of Wallace & Tiernan's complete flour service.

NOVADEL FLOUR SERVICE DIVISION
WALLACE & TIERNAN INCORPORATED
25 MAIN STREET, BELLEVILLE 9, NEW JERSEY
REPRESENTATIVES IN PRINCIPAL CITIES

N-1154



A is still for apple, and B is still for bread

Since the alphabet began, we've learned it through the words that mean the most.

Simple words, with great meaning . . . like Bread. B stands for Bread, and Bread stands for food, for home, for security. Bread has stood for these things since man first stopped roaming to cultivate his fields and raise his grain and start a civilization.

The world has changed a lot, but the basic alphabet by which we live has changed very little; the basics are still the same . . . and B still stands for Bread.

General Mills proudly takes its part in supplying the baking industry with the finest flour the world has yet milled.

Good eating will always begin with Bread

General Mills